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Design



KERAMIC STUDIO--Index

Volume V

May 1903 to April 1904 inclusive

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KEEP THE FIRE ALIVE.

KERAMIC STUDIO

ANNIVERSARY NUMBER

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Some Leading Agencies of Ceramic Studio.

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KERAMIC STUDIO

Vol. V, No. 1

SYRACUSE NEW YORK

May 1903



THE Fourth Anniversary of the KERAMIC STUDIO finds the Ceramic World at last joining the Arts and Crafts movement—but with so much caution and in such a serious spirit that we cannot but feel that the influence is to be permanent and not one of those passing fads so enthusiastically entered upon and quickly dropped by fickle American fancy.

Entering upon its fifth year KERAMIC STUDIO, in pursuance of its constant policy of helping serious students as far as is in its power, will open a department of Crafts under the direction of Miss Emily Peacock of Brooklyn. Practical instruction will be given in every craft which can be practised in the home or private studio. Wood carving, pyrography, leather and metal work, enameling, basketry, etc., will be taught.

Our readers who are interested are at liberty to ask for any desired information on these subjects, which can be answered in the magazine.

With this number we will begin a series of lessons on design by Mr. Hugo Froelich of Pratt Institute, Brooklyn. In connection with these articles and under the head of The Class Room, opportunity will be given to serious students to solve the problems and receive criticism. The practical lessons for beginners in pottery, by Prof. Charles Binns of Alfred University, will be continued and for the benefit of more advanced students and professionals a series of ten papers on the ceramic movement in Europe with practical instruction in hard fire ceramics will be given by Taxile Doat of the Manufactory of Sevres.

Our magazine "Old China" has been ably reinforced by the addition to our staff of Mrs. Mary Churchill Ripley.

For beginners, the Answers to Correspondents page is always at their convenience.

Elaborate plans have been laid for future competitions, the details of which will be given in another paragraph.

Every effort will be made as heretofore to keep the readers of KERAMIC STUDIO in courant of every movement in the Ceramic World and increasingly benefitted by practical instruction in every new and good thing in Ceramic Art.

*

These extracts from a letter of Mr. Hugo Froelich of Pratt Institute, Brooklyn, will be full of interest to the readers of KERAMIC STUDIO, announcing, as they do, the awards in this year's spring competition, with comments that should be invaluable to those who are seriously endeavoring to do good work.

No naturalistic design in black and white worthy of the prize having been sent in, it has been decided to defer this competition until the fall. Details are given below.

KERAMIC STUDIO and its readers are very much indebted to Mr. Froelich for the interest shown in the work, and the more than willingness to give helpful hints to designers for ceramics:

"I was delighted at the variety and excellence of the work.

A seriousness of desire for good art was manifested in all. On the whole the work is very promising. I would urge more care in execution. A few of the sets have that professional quality that contrasts strongly with a kind of slip shod way and amateur rendering of many of the others.

Conventional Study in Colors. First Prize, M. M. Mason, New York.

"Of the conventional studies in color, Miss Mason easily carried the honors. Her sketch has that most *precious quality* known as individuality. What it is can hardly be expressed in words, as it is purely emotional. If for instance, four painters make a study of the same flower, we will have four interpretations; one may give us a color scheme, another a line motive, a third the largeness of simplicity, but each dominated by a personal quality. I find in the study of Miss Mason dignity and restraint; the shapes are not crowded with detail; the parts are so well related that one can take in the design at a glance."

Honorable Mention, Frederick H. Rhead, Tiltonville, Ohio.

"Mr. Rhead's peacock was a close second, showing by his sketch a finely trained mind for harmony of line, massing of light and dark shades and especially the color scheme. A golden yellow permeated every color note, thereby giving the sketch a harmony which the fish design lacked. This treatment is known as dominant harmony and was employed by the Venetian painters of the 16th century a good deal. It consists of having some one color dominate all colors used. Miss Mason employed this same method by making blue the dominant note.*"

Best Conventional Design in black and white made from one of the above subjects, adapted to four forms, etc. First Prize, Emily Peacock, Brooklyn, N. Y.

"This set has a severity combined with a refinement that gives it an aristocratic quality. There is usually a tendency to rush into every empty space and fill it up with anything for fear that the object will not seem ornamented, whereas good design considers fine proportion and well managed empty spaces as an essential and often as the only one. This has been observed."

Second Prize, Margaret Overbeck, Greencastle, Ind.

"This is very tender and refined and in a delicate color scheme ought to make a most delightful effect. Here the shapes have been managed to keep the structural lines of the form, whether horizontal, vertical or curved. The design answers and repeats it in a slight variation. The greys and blacks are of such a relation that repose is attained. Originality is one of the strongest points in favor of this set."

Third Prize, Lucia A. Soule, Melrose, Mass.

"This set has harmony of line, every movement in one part responding to some movement in another part. If there had been less of the movement, if fewer forms of larger size had been used, the design would have gained in simplicity. The originality in treatment of the motive is to be commended.

*The studies of Miss Mason and Mr. Rhead will be given later on as supplements in color.

Grouping a set on one sheet by overlapping of the pieces is disturbing, as it does not produce the same effect that the actual pieces placed in that same position have. The design on one piece belonging to one kind of arrangement, interferes with the design of another piece, having a different movement, thereby creating confusion."

First Honorable Mention, Florence E. Segsworth, London, Ont.

"This design has a solidity and severity that seem the opposite of the second prize. There is a frankness of expression, a vigor that is refreshing. In color the contrast between the black and white ought to be modified; this would improve the design. The spaces are well balanced and related with the exception of the plate, the center of which is too small and tight. The cup, bowl and pitcher are somewhat finer than the saucer and plate."

Second Honorable Mention, Elizabeth J. Hall, Brooklyn, N. Y.

"While somewhat set as a design this has a severity and completeness that compel attention and favorable judgment. In the saucer the forms are perhaps crowded and produce slight unrest, but in the other forms the repose is maintained. A little finer adjustment of spaces and lines would have given dignity."

Third Honorable Mention, Katherine Sinclair, Brooklyn, N. Y.

"In this set the cup is especially fine and complete, the saucer on the other hand is overcrowded with shapes too nearly of a size; the pointed leaf and rounded flower rather clashing, which is not the case in the cup. The reason for this is that in the cup design, we cannot see all of the flower and leaf forms at one time, as half of the cup is always hidden from the eye and secondly the background shapes on the cup are better than those on the saucer. The plate is very original and well handled as to design, if the flower forms were a bit darker or the leaf forms a little lighter there would not be so sharp a contrast as at present. The design for the vase form is too heavy at the top. The bowl is very well handled."

Fourth Honorable Mention, Marie C. Crilley, Irvington, N. J.

"We gave this mention because of the excellence of the plate and some merit in bowl, saucer and cup. Saucer would be much improved by omitting the small forms above each flower. They disturb and overdecorate. The plate is very unusual in design and handling. The vase is not simple enough; too many themes used."

Best Naturalistic Study in Color, First Prize, Elder Blossoms, Marshal Fry, New York City.

"This has very harmonious line quality, is refined, full of color and shows much technical ability. In it there is freshness of interpretation, it is more than the mere portrayal of a flower."

First Mention, Thistles, Mary Alley Neal, New York City.

"Thistles have broad handling of the main mass and also the cluster of leaves just below this mass. The composition is fair and there is much power shown in expression."

Second Mention, Wild Roses, Henrietta Barclay Paist, Minneapolis, Minn.

"Wild Roses. If this sketch had composition it would gain very much. It is rather spotty and lacks relation of motive to background. Its treatment is noisy but it has individuality and a direct fresh handling. It is full of vital color and the quality of the wild rose has been splendidly given. This worker is capable of strong sketches."

[CONTINUED ON PAGE 28]

COMMENTS

A FEW comments on the year's competition will not be amiss and we trust that our readers and designers will take the pains to read carefully and remember anent the Autumn competition.

In the first place it was the occasion of great surprise to find how few understood the meaning of the expression "conventional study." A conventional study of a flower may be made in several different manners. Indeed, there is more chance for personality than in a naturalistic study. There are but three conditions. 1st. There shall be no aerial perspective, i. e., shading which gives the effect of solidity or roundness. 2d. The study shall be a faithful rendering of the general characteristics of the flower without too much detail. 3d. There shall be no attempt at design, no repeat or balance, simply a study of the flower itself.

The study of Spirea by Miss Larter in January, 1903, KERAMIC STUDIO, and the study of Dahlias in May, 1902, KERAMIC STUDIO, by Russell Goodwin, are good examples in black and white. The study of Wild Carrots by Miss Mason on the vase shown in March, 1903, KERAMIC STUDIO, is another. A conventional study in color simply has color added. Shading is allowable only to show variations of color, not to give the effect of form.

Another point to be noted is that few seemed to understand about drawing the motif in whole and in detail. A reference to the drawing of dandelions with the plate design by Bloomfield in August, 1902, KERAMIC STUDIO, and the flower articles of Mrs. Robineau will make this plain.

A third point was that very few studies were made from nature. To avoid this difficulty the KERAMIC STUDIO has decided to give the rules for the Autumn competition in this May number so that every one will have time to make his or her own studies from nature and then make designs from the studies.

A fourth point. Many good designs did not receive the favorable attention they might otherwise have had because the four forms were crowded together on one page, making so much confusion that it was difficult to judge of the merits of the design itself. It is always better to have a separate sheet for each design so that the effect of the decoration can be seen to better advantage on each form.

Another important point has been pointed out by Mr. Froehlich. Try and make your designs workmanlike, neat, exact, careful. It is much more liable to attract favorable comment. And above all we reiterate what we have so often said; *keep your design simple*. A design is perfect only when nothing can be added to it or taken from it without injuring the whole effect.

It is a pleasure to note the generous response of so many of our professional decorators to the expressed desire of the editor that KERAMIC STUDIO might have in the competition work which could be set before our designers as a standard up to which they might work. It is difficult for students to understand just what is wanted without having an example set before them.

It has been thought well by the management to make some changes in the rules regulating our competitions, so that students or decorators who are just beginning to try their hand at designing may not be discouraged. Hereafter there will be a Spring competition and an Autumn competition.

The Spring competition will be open to all. The Autumn competition will be open to all *except* winners of first prizes in previous KERAMIC STUDIO competitions.

THE AUTUMN COMPETITION

READ CAREFULLY RULES GOVERNING COMPETITION.

RULES

SUBJECTS—Wild Flower or Tree Growth, or Game Birds, or Fish

EACH study or design for competition must be accompanied by a careful outline drawing of the subject with a separate drawing of details, i. e., if a flower, the leaf, petal, stamen, etc.; if a bird, the feather, claw, etc., or any marked peculiarity; if a fish, the eye, markings, etc., or any peculiarity.

Also with each study or design must be sent a color scheme or treatment. The naturalistic and conventional studies are not to be adapted to any form.

Best naturalistic study in black and white.

First prize, \$10.00. Second prize, \$5.00.

Best conventional study in two to five colors.

First prize, \$20.00. Second prize, \$15.00.

Best conventional study in black and white.

First prize, \$10.00. Second prize, \$5.00.

Best conventional design in black and white, the same motif applied to four forms, i. e., plate, cup and saucer, tall form and low dish.

First prize, \$25.00 Second prize, \$15.00. Third prize, \$10.00.

No one is excluded from the competition except former winners of first prizes.

Non-subscribers and foreigners are eligible.

Mark with fictitious name or sign, same sign to be on envelope enclosing name and address of designer.

Competition closes October 15, 1903.

Designs must not be traceable to any existing pattern. All work submitted should be mailed flat. All drawings should be done in India ink on bristol board. Designs not taking prizes will be considered for purchase.

If each design is made separately and not overlapping another, it will be more likely to attract favorable attention. Strive for simplicity and appropriateness of design. More than one set can be submitted.

PRIZE COMPETITION—\$500.

FOR a design, symbolic of the Lewis and Clark exploring expedition of 1804-6, the settlement of the western part of the United States by Americans, the development of trade on the Pacific Ocean and the reawakening of Asia.

Competition closes on June 1, 1903, and designs should be sent before that date to I. N. Fleischner, Chairman of the Committee on Press and Publicity of the Lewis and Clark Centennial Exposition, Portland, Oregon. They should be at least one foot square and in four colors, oil or water, and so made that they may be reproduced by half tone or lithograph process for pictures as small as one and three-quarter inches.

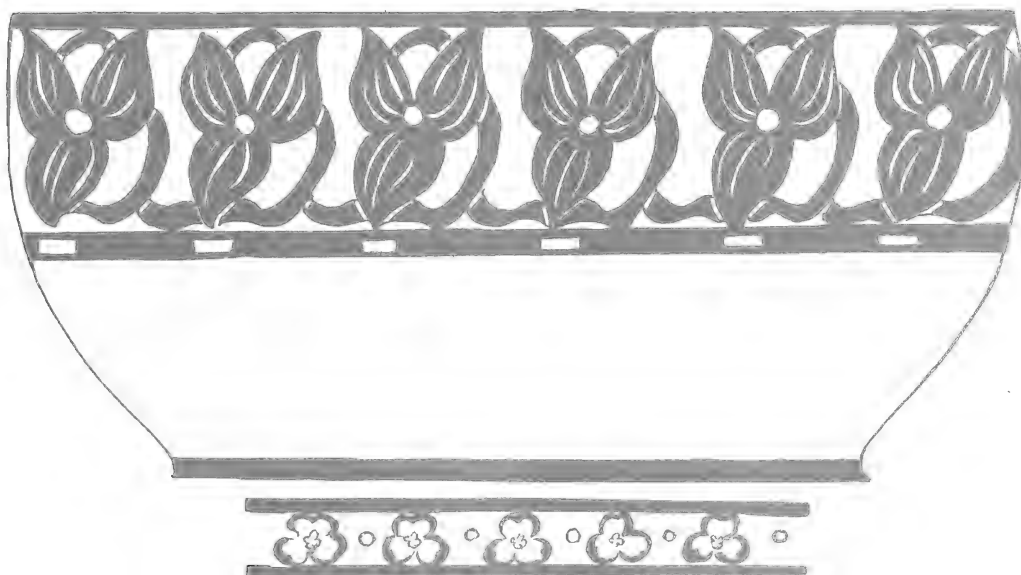
Designs must be free from intricate details. For simplicity and effectiveness, the design adopted by the Pan-American Exposition at Buffalo is recommended for study.



TREATMENT FOR FLEUR DE LIS—(Page 4)

Henrietta Barclay Paist

THE flowers are purple, yellow and white. For the purple flowers use your favorite mixture or mix three-fourths Dark Blue (Dresden) with one-fourth Lacroix Ruby Purple. Model the upper petal delicately and strengthen and vein the three lower petals with the same mixture. The upper petals of the white flowers are modeled with Copenhagen Grey, and the lower ones varied with the purple mixture. The upper petals of yellow flower are modeled with White Rose and glazed with Albert Yellow in the second fire. The lower petals are worked with Yellow and veined strongly with Blood Red, adding a touch of Brown to darken. The tufts on the lower petals of all the flowers are a bright yellow, model around it with White Rose to make it more permanent. The greens are rather bluish except in the calyx and buds, which is more yellow. The best background is a soft dark green, running into a delicate grey (Copenhagen) at the top. Or if one likes it, can be blended gradually from green into a pale yellow (Albert's Yellow), at the top if the object is a vase.



BOWL—CATHERINE SINCLAIR—THIRD HONORABLE MENTION IN DESIGN COMPETITION



FLEUR DE LIS—HENRIETTA BARCLAY PAIST

Treatment on page 3



PHLOX

LUCIA S. SOULE

Third Prize in Design Competition

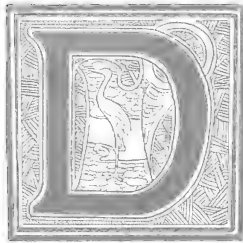
Ground, pale ivory; design in grey green, with flowers a dull pink, yellow centers. This is very effective carried out in grey green and violet blue or other shades of blue and green, in two shades of dull blue, or in monochrome.

GRAND FEU CERAMICS*

I write these articles with the view of being useful to isolated artists fond of the arts of the fire, and to render homage to the glory of the Manufactory of Sèvres, to which I have belonged for the last 26 years. To Sèvres and to my comrades I owe all my technical skill and the greatest part of my art. The decorative compositions which I have executed there exceed three thousand and are dispersed in private collections and museums. I have refused many brilliant offers from foreign factories, but as I was unable to resist the passion of the ceramist and as a ceramist does not exist without his kiln any more than a violinist without his violin, I have established in my residence a laboratory of experiments where I conquer from the fire the ceramics which have brought me a gratifying success.

TAXILE DOAT

I. THE CERAMIC MOVEMENT IN EUROPE IN 1900



URING the past century the Manufactory of Sèvres has been the promoter or at least the most powerful factor of all ceramic evolutions. Since its creation it has been in France the radiant sun toward which the workers in clay have turned their eyes, whether as industrials they wanted to decipher the secret formulae of the laboratory, or as

artists they sought inspiration in the works loved by the kings, great dispensers of vogue and propagators of fashion.

In Europe, after coming to the front with its precious *pâte tendre*, supplanting Meissen in the hard porcelain and the painting of polychrome flowers, creating the charming works which are called *biscuit*, a creation which resulted from the failure to glaze the statuettes, as was done at Dresden, and after undertaking the execution of monumental vases, it gloriously kept at the head of the movement with its marvelous reproductions of paintings. A decorative mistake of course, which delayed the coming of the *grand feu*, but increased its renown and saved it from political tempests.

Sèvres delighted in this glorious mistake until it received in 1847 from Father Ly some of the productions of the Far East. Then cultivated minds understood that there was something else to do than transmitting to posterity, on indestructible material, a marvelous but unfaithful reproduction of the perishable works of painting.



Sèvres. Hard porcelain, date 1860. Pâtes of application by Mr. Gely. Small piece.



Sèvres. Hard porcelain, date 1884. Small jewel box, enamel decoration by Mr. Paillet. Belongs to the Sèvres Museum. A replica of this box was presented to Mrs. Miolan Carvalho on her farewell performance of Marguerite in Faust.

Ebelmen by breaking some Chinese pieces, understood the different stages of their fabrication, and experiments crowned with success gradually brought about a revolution, which is now complete, in the processes of decoration of hard porcelain. The evolution had been slow but was not to stop any more.

In 1851 Sèvres sent to the London Exposition the result of its researches, a series of cups and saucers decorated like some Chinese pieces, over the clay, before glazing, and like them covered with white or colored glazes. As to colored glazes, they were inferior to the exotic models, but they had the advantage of possessing more varied and richer colors, and under the feldspathic enamel they were protected from all alterations. Regnault and Salvétat, their inventors, called them *pâtes*

* We begin in this issue the series of articles by Mr. Taxile Doat, which we announced some time ago. The three first articles will be general comments on the ceramic movement as shown by the Paris Exposition of 1900, and on the organization and the products of the Manufactory of Sèvres. The other articles will be technical. We will use some of the French terms when the translation into English does not seem to us to give the exact meaning of the term, for instance, "*grand feu*" for specially hard fire, the word applying to much higher temperatures than are given to ordinary porcelain and stoneware; also "*grès*" for the new stoneware product fired at *grand feu* temperatures; "*flamé*" for wares subjected to the flame in the kiln, etc.—(Ed.)

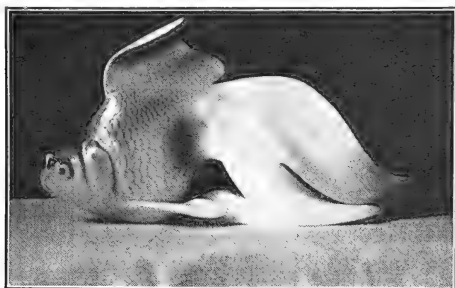


Copenhagen. Hard porcelain. Taxile Doat Collection.
Horse fly, blue body, white wings. Mouse on a lump of sugar. Mouse-grey glaze. The lump of sugar is unglazed.

of application or pâtes-sur-pâtes. They met with great favor. Every ceramist wanted to see this discovery and profit by it, But the secret was jealously kept. Was not the factory then an Imperial property, a private establishment? All that was done was to impress the public by telling what expensive difficulties surrounded the preparation of these colors.

While Sèvres was trying to adapt to hard porcelain the processes of colored pâtes of the soft porcelain and of Chinese glazes, ceramists in France and in Europe were working for the improved fabrication of soft porcelain.

Meissen confined itself to muffle painting, and Vienna, which, after a glorious past, was entangled in financial difficulties until it died in 1864, had not the courage to undertake expensive scientific experiments.



Copenhagen. Hard porcelain. Fish, white, tinted with pink, black eyes. Taxile Doat Collection.

Berlin kept painting on its vases the Flemish scenes which the clever artists from Meissen, recruited by Frederick II, had brought with them.

Copenhagen followed the others, without having yet taken any interest in the Sèvres evolution.

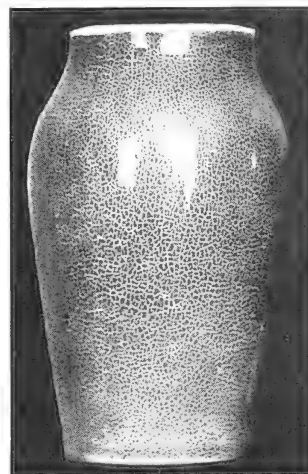
The wars of Spain had ended in 1812 the celebrated mark of Buen Retiro.

Italy which had seen the coming to light of the curious porcelains of the Medicis, of the fine majolicas of the Renaissance, of the soft porcelain of Capo di Monte, and had as early as 1734 made hard porcelain under the dynasty of the Marquises of Genori, was still in 1850 satisfied with the easy decorative results of muffle firing.

Practical England preferred to experimenting, the improvement of its soft porcelain, which had become phosphatic and was called by Brongniart "natural" because it contained only elements taken direct from nature. Being half way between the hard porcelain and the artificial soft paste, it had neither the difficulties of the first nor the losses of the second; adopted

all over the Kingdom, it answered well the needs of a purely commercial order which had been the incentive of its clever inventors, so England also was not interested in the new movement.

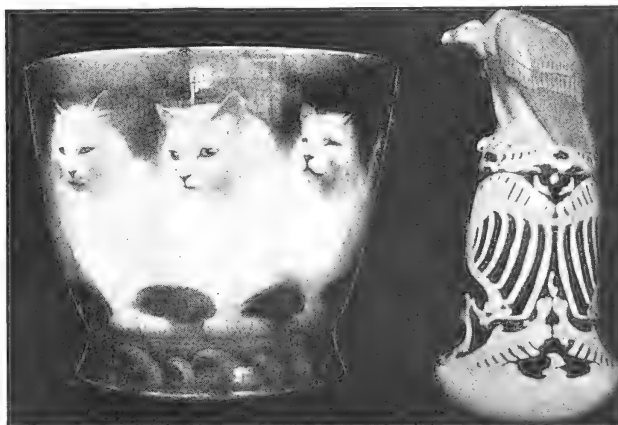
However in France this movement was growing outside of the Imperial factory. Minds were on the watch. The Limousins, owners of the Kaolin quarries, were extending their factories which gradually, by the durable qualities of their hard porcelain, were giving a death blow to their competitors, the glorious faience factories of the preceding century, Rouen, Nevers, Moustiers, Strasbourg, Marseilles.



Copenhagen. Small piece of craquelé porcelain, called truité (speckled trout.)

Mr. Solon, initiated among the first, through his presence in Sèvres, to the new researches, dispersed everywhere as early as 1860 the clever subjects of his ceramics, while some inventive minds, inspired by the brilliant enamels of Palissy, were seeking new faience enamels. Avisseau 1845, Barbizet 1859, Pull 1855 and the Parvillées led by their works to the birth of the agglomeration of artists, which under the commercial name Theodore Deck forced the attention of the artistic world and shone in the first rank in the Expositions of 1867 and 1878.

Near the exhibit of Theodore Deck in 1878, the Limousin



Cats. Vulture. Copenhagen. Hard porcelain, grand feu underglaze decoration.



Copenhagen. Hard porcelain. Grand feu underglaze decoration.

chemist Peyrusson showed a palette of grand feu colors under the glaze of hard porcelain, a palette which I had used since 1875, before I entered Sèvres, in the pâtes of application which I was dispersing among collectors.

From that time, we see in France a bitter but stimulating fight between the partisans of the grand feu porcelains and the friends of painting over porcelain and of faïence.

Toward the end of the Empire, Ch. Haviland entered the fight by establishing at Auteuil, near Paris, a laboratory of experiments. A group composed of the artists Aubé, Chaplet, Ringel, Dammouse and of the chemist de Rabot formed around the master engraver Bracquemond. This group, not satisfied with the decoration of hard porcelain or conscious of its difficulties, introduced the artistic grès (stoneware). But this new product did not meet with favor from the public, and the Auteuil laboratory was dispersed, after leaving a profound mark of its passage.

A commercial fact, insignificant by itself, awoke at that time the curiosity of collectors and the attention of artists. This fact was the continuous introduction in France, under the initiative of Mr. Bing, of those marvelous Chinese ceramics, enriched with brilliant glazes, of those vases without any other decoration than a general tone of color and with a beauty of glaze, that dominant quality of ceramics, which reminded one of the glassy old porcelaine tendre of Sèvres and had besides the penetrating charm of the delicate tones of the celadons of iron in imitation of jades, or the vivid effects of the flammés of red of copper.

The curiosity of the students and of the public was also excited by their suggestive and bizarre names: mule liver, horse lungs, powdered tea leaf, orange skin, iron rust, etc.

Chaplet, after the closing of the Auteuil laboratory, had constructed a kiln for the fabrication of grès, but carried away by the vogue of the flammé reds and wishing to devote himself entirely to his new work, he sold the grès establishment to Mr. Delaherche who settled in that ready nest.

Deck and the Sèvres laboratory, working on the same lines as Chaplet, drew from their kilns a few beau-

tiful pieces at a great expense, but it was only in 1884, after the scientific regulation of reducing fires by Mr. Lauth, administrator of Sèvres, that the public was able to enjoy this new discovery in an imposing display of the most gorgeous flammés.

And at the same Exposition, a neighboring case contained the first white crystallization, the result of new experiments on glazes, especially on zinc glazes, which was going to be the point of departure of this rain of gems called crystalline glazes.

These new discoveries were rapidly bringing about the neg-

lect of porcelain painting and the adoption of grands feux, when the Danish artists made their sensational appearance at the Exposition of 1889.

The Copenhagen chemists who had kept themselves posted on the experiments of Salvétat, Lauth and Peyrusson, and had known the works of Sèvres in 1884, exhibited at the Exposition Universelle a series of dishes and vases, decorated with grand feu colors under the glaze, which had a brilliancy and an appearance of easy execution unknown to pâtes of application. Their success was so much the more marked from the fact that the enemies of Sèvres took the part of Mr. Lauth, who, on account of difficulties with his personnel, had resigned his position, against Mr. Deck, who had replaced him, in a systematic disparagement of the factory.

However, the success of Copenhagen had not prevented the triumph of the beautiful flammés which Chaplet was dispersing among the public, nor of the clever grand feu palettes of Peyrusson and Giraud-Demay, nor of the series of my pâtes of application, a specimen of which had been acquired in 1882 by the Commission of Beaux Arts for the Musée du Luxembourg and was the nucleus of that section of fine arts which has so wonderfully developed since.

This conquest of the Luxembourg by an object of art and the judicious distribution of honorific awards had stimulated the artistic world, when in 1892, at the Salon of the Société Nationale, Carriès, a genial sculptor, friend of Chaplet, without any help from chemists and without financial re-



Copenhagen. Hard porcelain, grand feu underglaze decoration.

Seagull listening, medium size plate, Taxile Doat Collection. Medium size plate, decoration executed with the American apparatus called aerograph.

sources, carried to its apogee the grès cérame, and enforced general admiration.

Then ceramists became legion, everybody wanted to model grès. This grand feu stoneware temporarily forged ahead of the porcelain which had itself thrown into confusion the crowd of faience makers. A male material, grès gave to products a character of solidity and hardness which attracted the sculptors, while porcelain, with its milky brilliancy and distinction, kept its admirers and followers. An impassioned struggle began between these two materials, the only logical ones, by their solidity and inalterability, both covered with the rational glaze of the grand feu, and we will find them side by side at the Exposition Universelle of 1900.



Bing and Grondahl, Copenhagen. Porcelain Vase, subject "Growth."

Sèvres would have achieved surely but slowly the complete reform of its decorative processes, if the appearance of Carriès and Copenhagen had not hastened its completion. These two factors were useful in this, that they provoked the magnificent French display of 1900.

Carriès, taken away in the midst of his youth and talent, had, like Palissy, numerous imitators, not gifted with the flame of the master, but interesting, especially Jeanneney, because they fought for the good cause. Chaplet, acclaimed in 1889, triumphantly reappeared with his flammé reds and his turquoises, covering a fine body with the curious chemical combinations of reducing atmospheres. The chemist Bigot took rank with his large-grès vases. Muller was firing at the same time his architectural tiles, and the works of sculptors loved by the public. He had restored the Hall of the Archers and the frieze of the lions in the Palace of Suze, and successfully carried out the audacious execution of the large composition by Charpentier for the Monumental Gate. Pillivuyt and Giraud-Demay met with favor with their metallic glazes. I also produced successful associations of grès and porcelain with artistic effect, and I renewed the pâtes of application with a series of fine mat glazes. Mr. Boissonnet showed interesting crystalline glazes on grès, and the exhibitions of Haviland were made attractive by his fine flammé reds. Grès was everywhere, outside as well as inside the monuments. Even terra-cottas, cleverly concealed under the glaze, took the appearance of the product in vogue. As to the friends of muffle decoration

and the faience makers, they were yet a glorious legion.

All the Art Magazines and newspapers of the world have praised and exalted as it deserves, the aristocratic Copenhagen porcelain, of so pure a material and of such a captivating and peculiar art. In 1900 it found again the admirers and enthusiasts of 1889. The masterly talent of the modelers affirmed itself in a series of little animals, insects, fishes, rodents, etc. each more charming than the other. Painters had drawn their decorations from familiar scenes of animal life or from the wild poetry of northern landscapes.

Copenhagen offered besides a group of small cabinet pieces, covered with craquelés or with unexpected and scintillating crystallizations, without falling into the mistake of the large crystallized vases of Sèvres. And very loyally the Danish chemists acknowledged that their attention had been called to crystalline glazes by the works of Sèvres exhibited in 1884.

The helpful influence of the Royal Manufactory of Copenhagen was manifest in all Northern ceramics and especially in the productions of Bing & Grondahl, which, notwithstanding more heaviness in shapes, could favorably compare with the wares of the Royal establishment. Sweden also, with the pale reliefs and the pink decorations of the Rörstrand porcelains, made a charming impression.

Holland, with Rosenburg, was represented by the twisted and bizarre shapes of a porcelain as thin as an egg shell, closely related to English porcelain and decorated with fancy paintings resembling more in technique the muffle fires than the grands feux.

England which during the century had not been interested in the struggle for the conquest of high temperatures, had taken little part in the Exposition. However, the Doultons had constructed a large grès pavilion, in which was a great accumulation of pieces, and among them a few of a real artistic and technical interest. But large pieces, like the great Diana vase, gave the impression of a pretentious richness, nothing more.



Fisher and Meig, Pirkenhammer, Bohemia. Hard porcelain, grand feu underglaze decoration. Medium size vase.

With a more modest exhibit, the factory of Pilkinton had beautiful majolicas due to the supple talent of Mr. Lewis F. Day and to the cultivated mind of Mr. Walter Crane, but the works of faience makers were not what we were looking for.

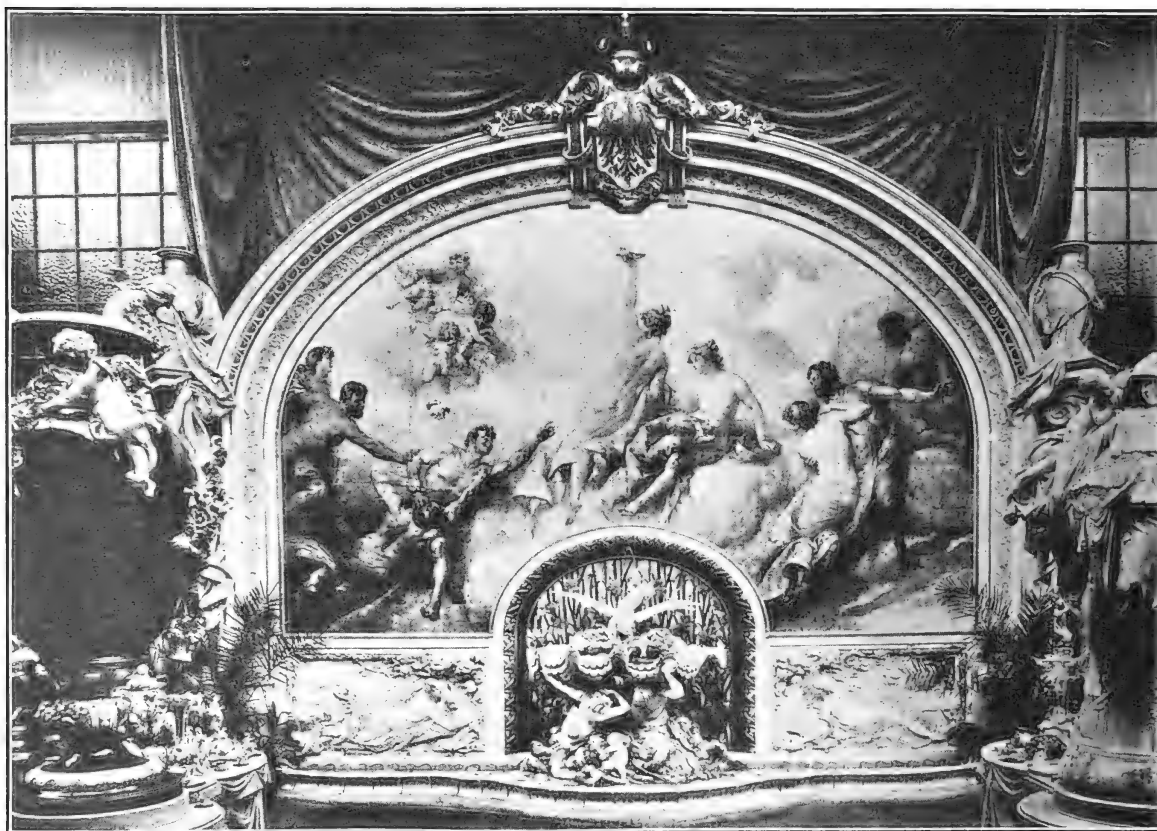
Minton had not thought advisable to send again the pâtes of application of Solon, which in their transfer to the opaque English porcelain had lost all the precious qualities which they owed to the French porcelain. And if Staffordshire had been represented, we would not have found there any of the new technical processes.

Italy, as if exhausted by its antique creative genius, delighted in the repetition of the past, the exact copies of the Lucca della Robbia, Urbino, Faenza, Caffaggiolo and other wares which have a glorious page in the history of ceramics but nothing in common with the art of modern pottery.

hard porcelain of remarkable plasticity, were grand feu decorated with a charming taste, which made a singular contrast to the fireworks of its neighbors. The colored pâtes of the Hungarian factory of Herend were also in the very best taste.

Saxony, so flourishing at the birth of porcelain, persisted in shutting itself in the style of a past century. Let us respect its lethargy.

The Royal Manufactory of Berlin (Charlottenburg) had brought master pieces of painting. Thinking that the paintings of Sèvres had been given up because they were not original, it had asked for cartoons from celebrated artists in order to display the virtuosity of its decorators. How useless all this pictorial effort which could have been more successfully treated, and at less expense, on a canvas applied to the wall. Around a vast composition surmounting a monumental



Berlin. Porcelain mantel-piece, overglaze painting.

Russia had exhibited a few grand feu pieces, among them some pâtes of application, which proved that the Manufactory of the Czar took formerly its inspirations from Sèvres, and some landscapes and decorations in the Copenhagen style, which showed it following now in the path of the Danish star.

Other Russian factories had remained, for commercial reasons, indifferent to the application of the new processes.

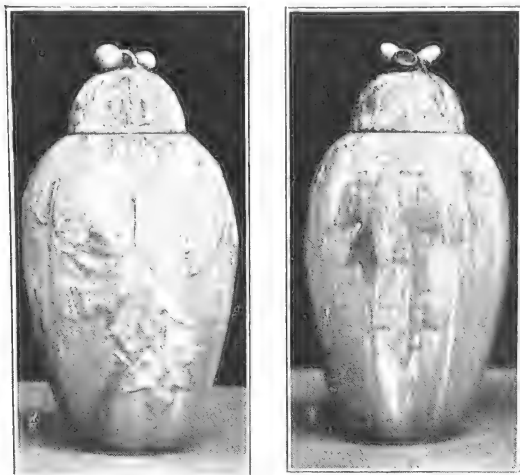
Austria and Hungary had spared nothing to affirm their partiality for gaudy tones in the decoration and gilding. Their loaded pieces dazzled the eye without charming. It is so difficult to put on little and just where it is needed. But in the midst of this showy exhibit there was a pearl, the factory of Pirkenhammer, near Carlsbad. All the pieces, in a

mantel-piece were large or small ornaments exalting the rococo Louis XV or the heavy romantic style of 1830. Fortunately the eyes and the mind rested on a few flammés and crystallized vases, which, timidly placed behind during the first months of the Exposition, were brought to the front toward the end, and on some pâtes of application on pink ground, of a great character, which will have, we are sure, a good and strong influence on future ceramics in Germany. This glimpse of red pearls drawn from the kilns gave us courage and we saluted this large composition, a master piece of technical skill, satisfied that it would be in Berlin the testament of porcelain decoration as practiced in the century just ended.

Japan replaced art by cleverness. Few pieces in this

great display gave any impression other than of unbearable coldness. China had remained deaf and had jealously kept for the eyes of adepts and the touch of the initiated, its treasures of idealism and good taste.

Among the imposing displays of the Belgian ceramists, the factory of Boch Brothers, of La Louvière, showed its serious artistic tendencies, while it revealed curious and unique quadrangular crystalline glazes, with soft iridescence, due to the researches of its energetic technical director, Mr. Diffloth.



Berlin. Hard porcelain. Two recent pieces showing the influence of 1900 and the transformation in the processes of decoration.

The United States, for which Mr. Bing had reserved a small room, had not taken part in the ceramic evolution. However it would be unjust not to mention the potteries of the Rookwood factory, which is so brilliantly managed by the eminent Mr. Taylor, with their flowing glazes, so charming to the eye and pleasing to the touch, also the greenish faïences of Mr. Grueby, of an art peculiarly attractive.

This conscientious study shows that what dominated as a whole in the ceramic Exposition of 1900, was the rational

use of grand feu colors, the palette of which, necessarily restricted at first, has been markedly enriched in the last 25 years and makes new conquests every day. Also, as well on grès as on porcelain, the charming display of crystalline glazes, discovered at Sèvres but developed at Copenhagen; the coming of mat glazes, more similar to the manifestations of nature, as nature is almost always mat, in fruit, flowers, plants, shells, insects, etc.; the use of grès in monumental construction and the giving up, especially in France, of this overglaze muffle painting, which, if it has had its use in a period of transition and expectation, has delayed considerably the most important discoveries.

The Exposition has undoubtedly demonstrated the superiority of the mat effect of grès in sculptural works, the unquestioned supremacy of porcelain in everything which charms the eye by the beauty of its finish, and the unsuitability to our damp and disintegrating climates of the faïences, which, with their glorious history and rich palette, can satisfy only the civilizations of more sunny climes.

And we have been glad to find that, notwithstanding storms, Sèvres is always in the first rank of the ceramic factories of the world, although it has in Copenhagen a most dangerous competitor, because, firing at a higher temperature (1470°C., Seger cone 17) than that of Sèvres (1410°C., cone 14) and of Limoges (1390°C., cone 13), Copenhagen has a finer material, also because its artistic creations are generally, by their scrupulous observation of nature, closer to great art.

A SEVRES VASE

The French Minister of Public Instruction and Beaux Arts has just made a present of a Sevres vase to Mr. David Francis, President of the St. Louis Exposition. The vase was conceived and executed by Taxile Doat, and its value was figured at about \$800. Subject, *The Kisses*.

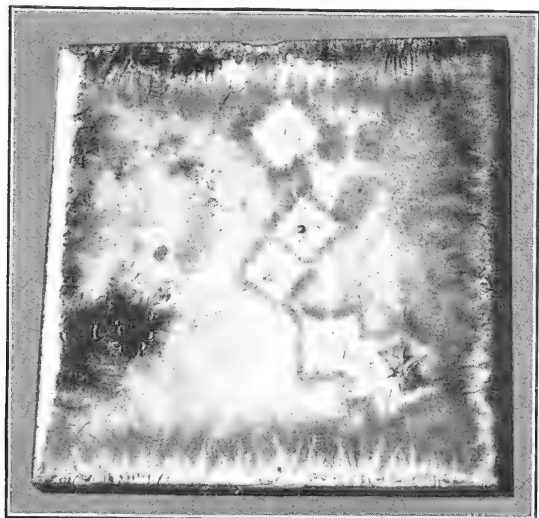
CLUB

NOTES

The Ceramic Club of Bridgeport, Conn., had an interesting monthly meeting, the guest of the day being Mr. George A. Williams.

Mr. George A. Williams, who has classes in New York and Newark, in Composition and Design, is also an illustrator of note, illustrating for the Century, McClure and Scribner's. He also illustrated the two books "Ten Boys from Dickens" and "Ten Girls from Dickens," written by Kate Dickinson Sweetser, and is now making extensive Shakespearean illustrations. His talk was very interesting, illustrating as he went along his idea of good designing, saying that the most important thing to be considered is good balance from the standpoint of the relation of space division, that is, the relation of each space to the other in the composition. "In design," says Mr. Williams, "get away as far as possible from detail." "Insist upon broad construction," "work down if necessary to minor detail."

The New York Society of Ceramic Arts held its monthly meeting at the Waldorf-Astoria April 14th, when the following members were elected to office: President, Mrs. Lois Anderson; First Vice-President, Miss L. W. Holcomb; Second Vice-President, Mrs. T. M. Fry; Third Vice-President, Mrs. Mary Alley Neal; Recording Secretary, Mrs. DeWitt; Corresponding Secretary, Mrs. Hibbler; Chairman of Art, Mrs. L. Vance Phillips; Chairman of Eligibility, Miss M. Mason; Chairman of Finance, Mrs. Sarah W. Safford; Chairman of Printing and Press, Mrs. Price.



Mr. Diffloth, La Louvière, Belgium (Boch Bros.). Grès tile with quadrangular crystallizations, Taxile Doat collection.



ARABIAN PLATE—EDITH H. LOUCKS

THIS design should be in flat enamel over a tinted ground outlined in either black or gold. The dotted part of ground may be tinted a dull blue, with the white space a soft yellow tint. The dark figures a rich red and the white a warm yellow, or it may be treated with a ground of Yellow

Ochre, the dark part a rich blue with the white figure a dull green with a center of yellow enamel in the small dark ornament.

This design may be carried out in several color schemes with good effect.

CLAY IN THE STUDIO

(Seventh Paper.)

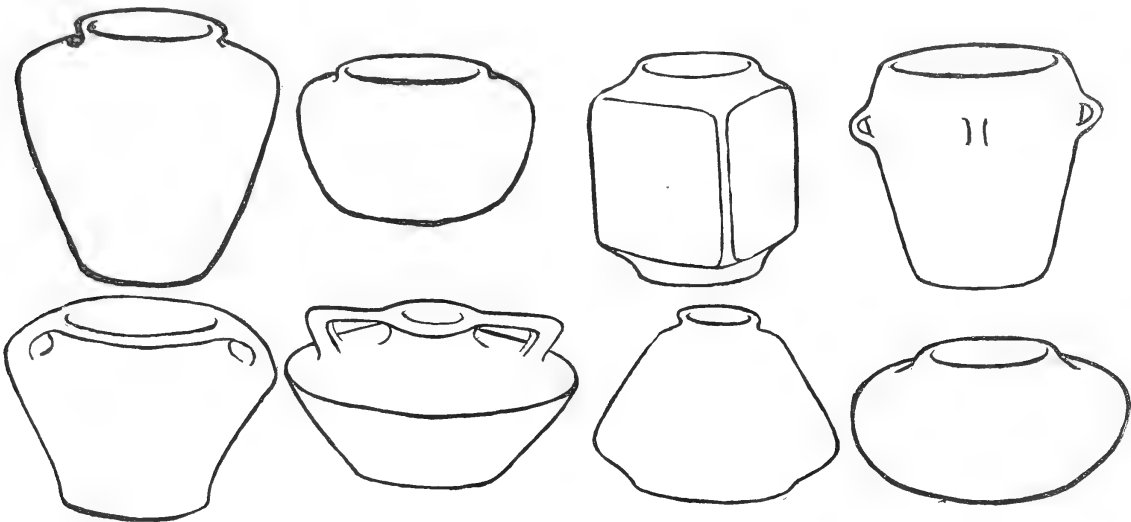
Charles F. Binns



FIRST among the questions to arise in the mind of the aspiring clay worker is "what shape shall I make?" Visions arise of severe critics whose scent for a copy surpasses that of a hound for game and who seem to know the contents of every museum by heart; or one is haunted by the spectre purist whose first question is "What is it for?" One wonders,

by the way, whether that question were ever asked about Raphael's cartoons or the famous peach-blow vase.

In order to ease the minds of the sensitive let it be said at once that it does not matter a straw whether the shape has been made before or not and, as to use, beauty is sufficient justification. It is a physical impossibility to devise a new outline and in the striving therefor many have made shipwreck.



It is related of a celebrated dramatic author that he detected an equally celebrated actor introducing on the stage some "business" which was not in the play. He remonstrated and the actor said in reply that he secured a good laugh from the audience thereby, "so you would if you sat on your hat" said the author.

This story may seem irrelevant, but the point is that the end does not justify the means. Novelty may be purchased at too great a cost. "You never saw anything like that before" says the Athenian, "No, and it is fervently hoped that nothing like it may ever be seen again."

At the beginning, simple forms only should be attempted. The tyro will find greater ease with built work than at the wheel. The spinning clay has a wondrous knack of asserting itself and escaping from control. A start is made in the full hope and intent of producing something fine, but lo! the clay gives a twist here, a wrinkle appears there and the unborn vase becomes a shapeless ruin. Building by hand, if slower, is more sure.

The work produced in coiling by Indian women is the natural outcome of the clay itself. If forms suitable for clay

are to be built, some such line must be followed, no copying, but, with similar material, similar tools and similar limitations the result would not be true if it were not similar. The first point to be sought is self expression. A drawing may be made beforehand but the better plan is to think in the clay itself. More "copying" is involved in reproducing a drawing of one's own than in unconsciously following the lines of some prehistoric vase. Therefore the outlines here given are not intended to be copied, nor are they taken with malice aforethought from actual vases. Their purpose is to act as suggestions of the more obvious lines to be followed in clay and as inspirations towards something that shall be truly expressive. One may prefer that one of the outlines should be fuller or more severe, or it may be that a neck would look better if made narrower, and so forth.

When the clay is taken in hand the creative thought will soon arise and will develop as it grows.

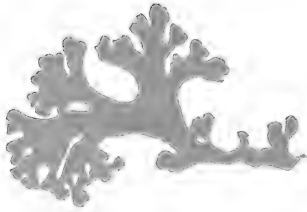
Certain types of form are suitable to each method and the examples are found in the same connection. An Indian jar could be duplicated on the wheel but the fact that a piece

so formed has a different quality of line would destroy the connection. On the other hand, it would be absurd to attempt by building to form a vase on pure Greek lines. These demand the wheel for their proper execution and no other process will adequately carry out the idea. If, then, wheel work be attempted let it be for such forms as are fit and, in like manner, let building be resorted to for work that is appropriate.

A relief is often found in fashioning pieces that are other than circular in form. Obviously these cannot be made on the wheel. A great variety of forms are possible and the Japanese school will be a fruitful source of inspiration. Square jars or tea-caddies, hexagonal and octagonal bowls and bottles, lobed and spiral lines can all be drawn upon in endless variety. An advantage of building is that large pieces can be made with even less trouble than small ones. With the wheel it is different. Here the difficulty increases greatly with every advance in size. The builder or coiler is limited only by the weight of the piece and the size of the kiln.

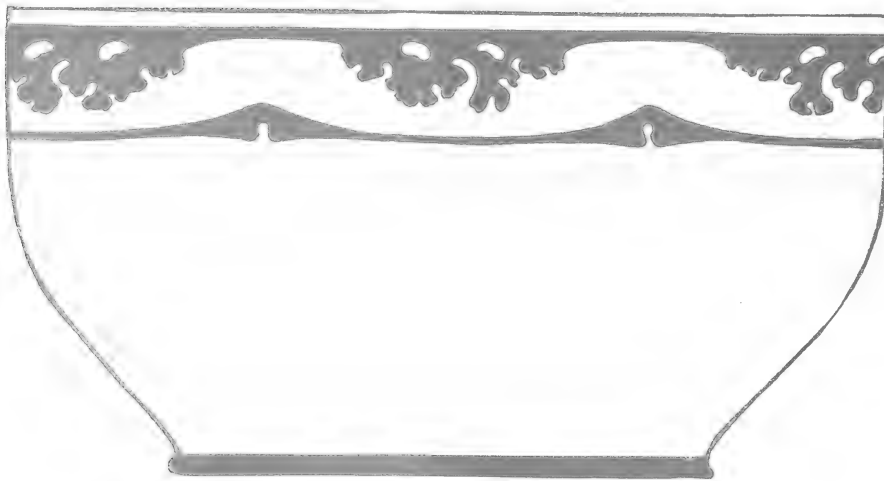
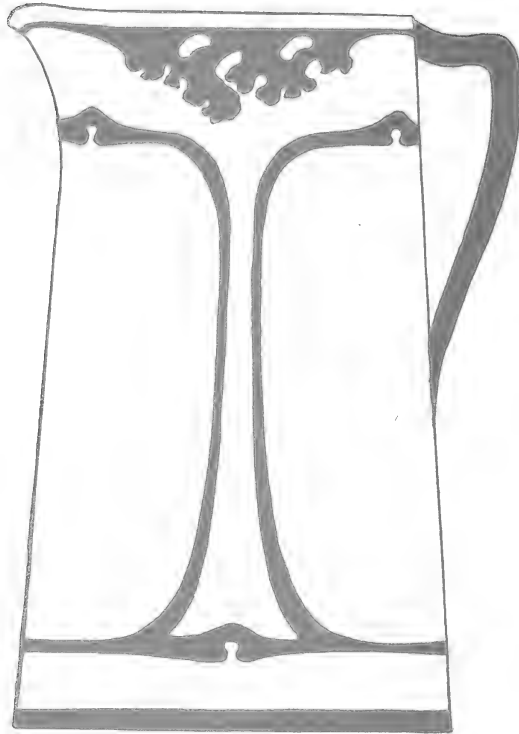
A fruitful source of enjoyment is the building of flower

[CONTINUED ON PAGE 16]



TREATMENT

Green would be the most appropriate color scheme for the seaweed design. Use either lustre or paint in motive, and outline in a warm black, or with gold. Paint in the background softly with delicate tints and draw together with a pad. Put a band of color inside top of cup, bowl and jug.



IRISH MOSS (SEA WEED)—FIRST PRIZE IN DESIGN COMPETITION—EMILY F. PEACOCK



IRISH MOSS (SEA WEED)—FIRST PRIZE IN DESIGN COMPETITION—EMILY F. PEACOCK

pots. Too often our growing plants are set in a crude red pot or if this must be concealed it is set within a colored and gilt jardiniere, which in most instances, is the embodiment of all that is horrible. Flower pots are easily made. The common brick clays that abound on every hand are well adapted for the purpose and a very low heat is all that is necessary, for they are all the better if porous. Then the table, the porch and even the lawn may be equipped with a series of personal ideals, each one imperishable and an ever living pleasure.

At this point a warning note must be sounded. Most persons who have made anything with their own hands are inordinately vain of the fact and of the object. "Tis a poor thing but 'tis mine own" is the thought and sometimes the word, especially the latter half. For anyone to acquire a reputation for the production of high grade works it is necessary to cultivate two things—the ability to distinguish the good from the bad and the courage to destroy that which does not satisfy. These are both rare and the possession of them has contributed in no small degree towards the production of the finest works of industrial art in the world.

It is perfectly natural that one should regard with parental affection a piece of pottery upon which thought and care have been lavished, but the attempt must be made to see it with the eyes of others. Separated from one's own personality there will often appear some fault or deficiency. Suppose such a piece were made by another, perhaps by a rival and competitor—the one who does such crude work, you know—What would be our opinion of it? Because, so surely as that example of our skill goes out to the world, it will be met by hostile criticism. To disarm this criticism every worker should be his own critic and should look at his work with disinterested eyes. To take it in detail, What of the style? Has it any? Can it be connected with any known period or school? Or is it simply a nameless shape? Does it fairly represent its style? Is it homogeneous? Not an Indian body with an Italian foot or a Greek handle on a British shape. How is it made? Does it bear evidence of careful thought and conscientious handling, or can it be said that it is slovenly or slip-shod in execution?

If such questions as these can be answered with satisfaction, it may be safe to send forth the much tried work to the judgment of a censorious world, but if there be dissatisfaction, it is sure that this will be more deeply felt outside.

But what about destroying that which does not perfectly please—it is good for something, can it not be kept just for this purpose or that? Keeping inferior things is like the morphia habit, it grows. If these unsatisfactory examples are allowed to lie around they will speedily deteriorate the standard of excellence. But the trouble should be detected before burning and then the clay can be saved and used over. The unflinching destruction of a piece or two is a great educator. One can cultivate the faculty, and courage will increase. The result of this will always be satisfaction. The work can be sent out with conscious calm, knowing that it is good. It may meet with objection and even condemnation at the hands of a careless community, but so much the worse for the community.

TREATMENT FOR JONQUIL STUDY

Mariam L. Candler

AFTER carefully sketching in the design, model the flowers for the first firing with a light wash of Albert's Yellow for the outer petals, reserving the high lights.

In the center of the flowers use Orange Red and Yellow

Brown for the darkest parts. Wash in the shadow leaves and blossoms in Copenhagen Blue, adding a little pink for warmth. Keep the leaves in the blue green tones, using Turquoise Green, Yellow Green, Yellow Brown and Shading Green.

The background should be light at the top, gradually darkening to the base or bottom of the vase, using Ivory Yellow, blending into Lavender Glaze and Copenhagen Blue near the blossoms, then Yellow Brown, Violet of Iron, Chocolate Brown and Shading Brown. All harmoniously blended makes a very rich and effective background; for second firing use same colors, strengthening where necessary. When nearly dry use the powder color over the background. Repeated firings give depth of coloring.

NATIONAL LEAGUE

THE two events of importance to the League and its friends, during the month of May, are the coming exhibition and the annual meeting. The following is a copy of the notices sent out.

EXHIBITION.

The coming exhibition of the National League of Mineral Painters, based on the course of study prepared by Miss Perry, Chairman of the Educational Committee, will be held at the International Gallery, 1 E. 40th St., New York, from May 4th to 9th inclusive.

All china must be received not later than May 2nd, sent addressed National League of Mineral Painters, care Taft & Belknap, 1 E. 40th St., New York.

The League will pay express charges on articles sent, and will prepay charges in returning them.

The President of each club is requested to see that each exhibitor is advised of these dates and the address; also to see that each piece bears the name, address and club on the under side.

It is especially urged that no piece shall be sent which does not fulfill the terms of the requirements, as they cannot be admitted. Presidents will please emphasize this fact.

IDA A. JOHNSON, Pres. N. L. M. P.

MYRA BOYD, Cor. Secy.

It should also be stated that pieces complying with the conditions, but not in competition, may be so entered.

The annual meeting of the N. L. M. P. will take place on Thursday, May 7, 1903, at 10 a. m., at the International Gallery, No. 1 E. 40th St., New York.

There will be an election of six members of the Advisory Board. Each club will be represented by a delegate and alternate for each twenty-five members and fraction thereof.

With the opening of the new exhibition and its start upon its journey, the League is confronted with the problems of last year, but with experience back of it, it is hoped that the old mistakes at least will be avoided. The committee consists of Mrs. Evannah Price, Mrs. W. P. Hibler, Mrs. L. Vance Phillips. This committee has prepared an itinerary with dates taking in all the clubs of the League, which will bring the exhibit back to the members in time for the Christmas exhibitions, instead of keeping it ten months on the road as was the case with the last.

An effort is being made to have the next year's course of study announced at the annual meeting, as several clubs wish to incorporate it in their work, and it may also be an advantage to have a longer time to prepare for the next exhibition, which in all probability will be at the St. Louis Exposition.

IDA L. JOHNSON, President.



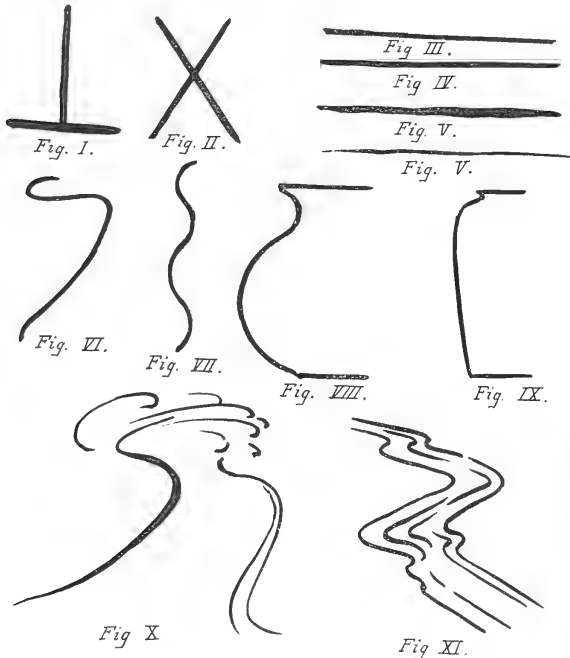
JONQUILS—MARIAM L. CANDLER

PRINCIPLES OF DESIGN

Hugo Froehlich

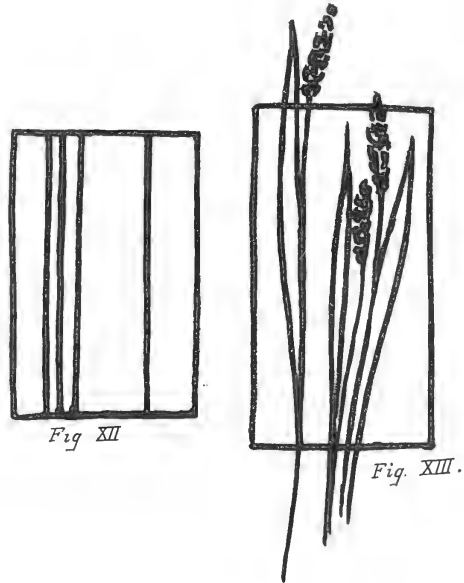
MOST hopeful sign of the times is the desire on all sides for a better understanding of the relation of design to the object of which it is a part. I do not like the expression "decorating an object" because that implies something added, an after thought. An ornament ought to be so intimately a part of the object

that the two cannot be thought of separately. In planning his work, the designer ought to consider the use of the object, the limitations of the material, the structural element. This last condition is often violated, viz: the design does not enhance the structural element, but often assumes a movement entirely unrelated to it. Simplicity is another requirement difficult to attain. The desire to over-ornament is responsible for more than half of mediocre work. As soon as an empty space on an object offers itself the worker feels the impulse to rush in and cover it with some motive for fear that the object will not seem decorated; instead of pausing and considering, whether the space left untouched or, at the most, filled in with a flat tone of refined color, would not keep simplicity and dignity. These are some of the conditions that govern good design and certainly apply to the treatment of pottery and porcelain.



The Ceramic art is one of the most delightful of professions. It is the ceramist's mission to materially influence the masses. He becomes an instructor through his work, and if he does meritorious work it will be recognized by people of culture. They in turn extend this recognition to their circle of influence, until gradually a market for fine things will be established. Manufacturers will pay no attention to this until the public demand good work, when they, the manufacturers, will be forced by a spirit of commercialism to give it

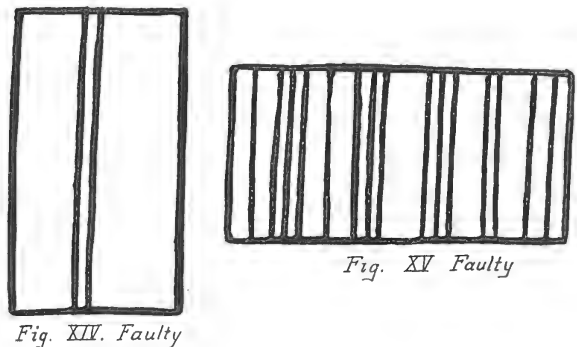
heed. And why may not good designs be multiplied by machinery instead of the commonplace ones? It does not cost any more. What we need is to create a demand by the masses for a better article, and it devolves on the artist and craftsman to educate their taste. In this as you will readily see the ceramist has an important share.



A more beautiful and useful medium than pottery and china hardly exists. It is almost as much a daily companion as the garments we wear, and for this very reason ought to be beautiful and worthy the artist's consideration.

We are immensely influenced by our surroundings and find reflected in our work the commercialism about us. To counteract this influence we need to carefully study that which we know to be good art, and to analyze the principles governing the same.

It is with these principles that I shall deal in these papers and hope by a consecutive series of problems to give the reader a better understanding of what constitutes good design. They are purely exercises to impress on the mind certain principles, so that we can proceed by a method of reasoning in our work and not depend entirely on our emotions.



I shall deal in the first exercises with the language of line and relation of areas. Every design is an arrangement of shapes whose edges come under the consideration of line movement. Sometimes the line is frankly expressed as in the



Fig. XVII.

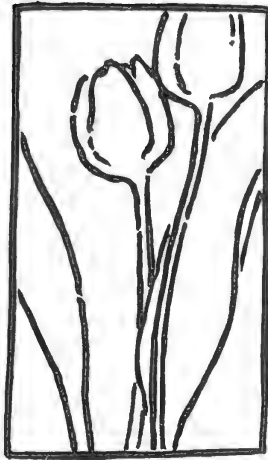


Fig. XVIII

Japanese prints and often it is the movement produced by the meeting of shapes. In either case this boundary is considered a line. The possibilities of this line language are unlimited. To cite a few examples: the meeting of a horizontal by a vertical line (fig. I) gives dignity and repose, while the meeting of two diagonals (fig. II) is that of action. The line drawn with a rule (fig. III) is tight, lifeless and mechanical, while the line drawn free hand, (fig. IV) if the mind controls the medium, shows directness and power, but if the mind does not control the hand, it discloses weakness or rudeness (fig V). If we go from straight to curved lines the possibilities of expression increase immeasurably, as there is greater opportunity for individuality. The curved line may have fire and vitality like the crack of the whip (fig. VI) or it may be tame and lazy like the line that has nearly the same curvature at every point (fig. VII). As the circle and square are universal types devoid of variation except in size, a line like part of a circle does not admit of that freedom and personality. Hence a vase whose contour is nearly like segments of a circle, (fig. VIII) is not so interesting as one in which there are long sweeping lines and short snappy curves (fig. IX). Then there is the line that seems a fitting force, as in the curves of the breaking surf (fig. X). Again the melodious quality of the conventional line of a brook, (fig. XI) the tenderness and refinement of a line study of a flower (fig. XVI) and with slight variations the firmer quality of leaf and stem. The line that by its variation gives all the qualities of a tree, a cloud, a house, a human figure (fig. XXII).

Many other examples might be added, but for our purpose it is advisable to begin with the simplest term, that of the straight line, and work by easy stages to advanced problems requiring much more power. The straight line is within the reach of all, even those who have not studied, while the line that is to express a flower, figure or landscape presupposes some knowledge of these forms. As all designs consist of some given bounded shape broken up into other shapes, we may consider that of a square or rectangle and break it up by means of straight lines into areas of unequal size, but well related. Usually symmetry, balance and repetition are considered in a design; but that kind of beauty that is produced by a fine adjustment of unequal areas, is seldom thought of

as a principle. And yet this is one of the most important. It is prominent in every well composed painting. It is true of a building in which the structural lines, the broad wall spaces, the doors, windows and decorations are thought of as so many parts having a direct influence on each other by their size and shape.

Suppose we give this principle our first consideration. Suppose we draw a rectangle five inches one way (the other dimensions to be left to the student and lay across it several stalks of grass, as in fig. XIII.) These stalks will break up the rectangle into lines and areas having a vertical movement, and can be adjusted so as to produce a bit of beauty. To copy one of these arrangements requires some knowledge of drawing. If, however, the composition is reduced to the simplest terms possible, viz.: straight lines (fig. XII), we would still have the same principle involved and produce a similar kind of beauty. The point I wish to make is, that any one can draw straight lines and try to produce beauty, thereby exercising the mind and judgment in the direction of art expression. Just as the flower composition is more difficult than



Fig. XIX Faulty



Fig. XX Faulty

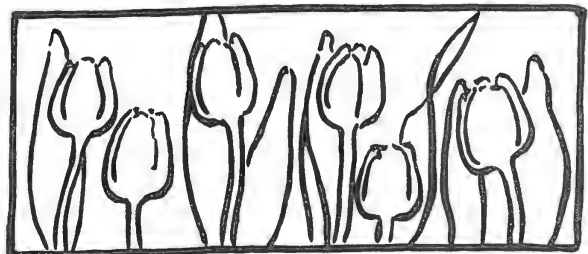


Fig. XXI Faulty

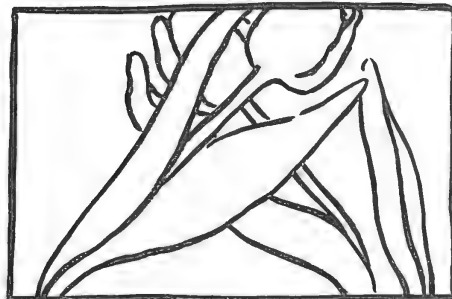


Fig. XXII Faulty

the straight line, so the landscape is more difficult than the flower, and the figure more difficult than the landscape. However, the principle involved (that kind of beauty produced by well related unequal shapes) is identical in all of these. It is for that reason that I begin with No. XII. The exercises can commence with fig. XIII just as well as fig. XII, but a rational mode of procedure would be to start with No. XII.

I. Problem. The rectangle may be any size (4 or 5 in. one side is suggested) and placed horizontally or vertically; across this draw straight horizontal or vertical lines trying to relate lines and spaces as in fig. XII, broad grey pencil lines, free hand, as a ruled line is tight, mechanical and has absolutely no personal quality. A vigorous pulsating line marks control of the hand and material. Make six different arrangements and mark the best No. 1, next best No. 2, etc. This develops invention and judgment. Every solution ought to have large and small areas well related. Too many large areas produce monotony as in fig. XIV, too many small ones, give unrest and a crowded effect as in fig. XV. This latter fault is especially to be guarded against as it corresponds with over decoration, noisy treatment and the use of too much detail. It is the opposite of simplicity.

II. Problem. Compose tulip motive in horizontal or vertical rectangle (about 5 or 6 in. one side) use pencil and any white paper such as German drawing paper. Several flowers may be employed, however the student is cautioned against the use of many in so small a space, as it is apt to result in confusion. Only the decorative lines of the flower are to be considered, hence avoid shading. Allow the rectangle to cut frankly across the flowers, leaves and stems. This would be true if we placed several tulip stalks on a rectangle drawn on paper and then copy only those parts that are enclosed by the rectangle. Fig. XVIII is faulty, because it is not a composition. The flower forms and the background are not well related. It is merely a flower placed in the middle of a rectangle.

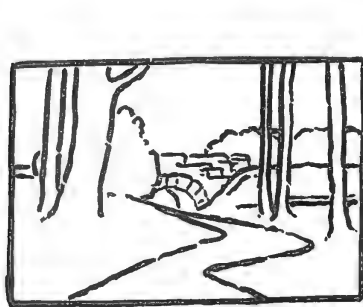


Fig. XXII

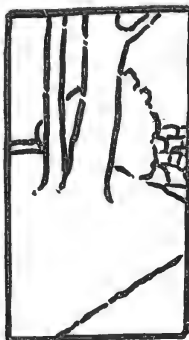


Fig. XXIII

Fig. XIX is faulty because the movement from one corner to the opposite corner calls undue attention to the corner, and divides the rectangle into prominent triangles. Fig. XX is faulty because over crowded, and background shapes are not well considered. In fig. XXI the X movement being unduly prominent produces a clash between the lines. Fig. XVII is a correct solution, because the terms used, namely: flower, stem, leaf and background shape are given equal consideration. The background forms receive special attention. They are shapes in the same sense that the flowers are shapes; both are parts of the design, hence both will affect each other by their size and form. Too often this is forgotten and the design is placed on the background, but does not become a

part of it. Make six different arrangements in six rectangles and mark the best No. 1, next best No. 2, etc.



Fig. XXIV Faulty

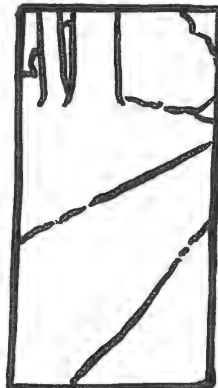


Fig. XXV Faulty

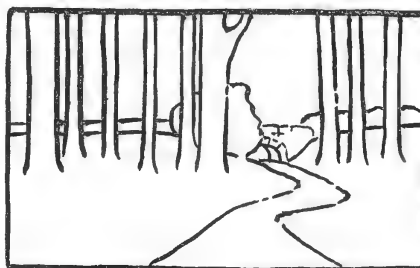


Fig. XXVI Faulty

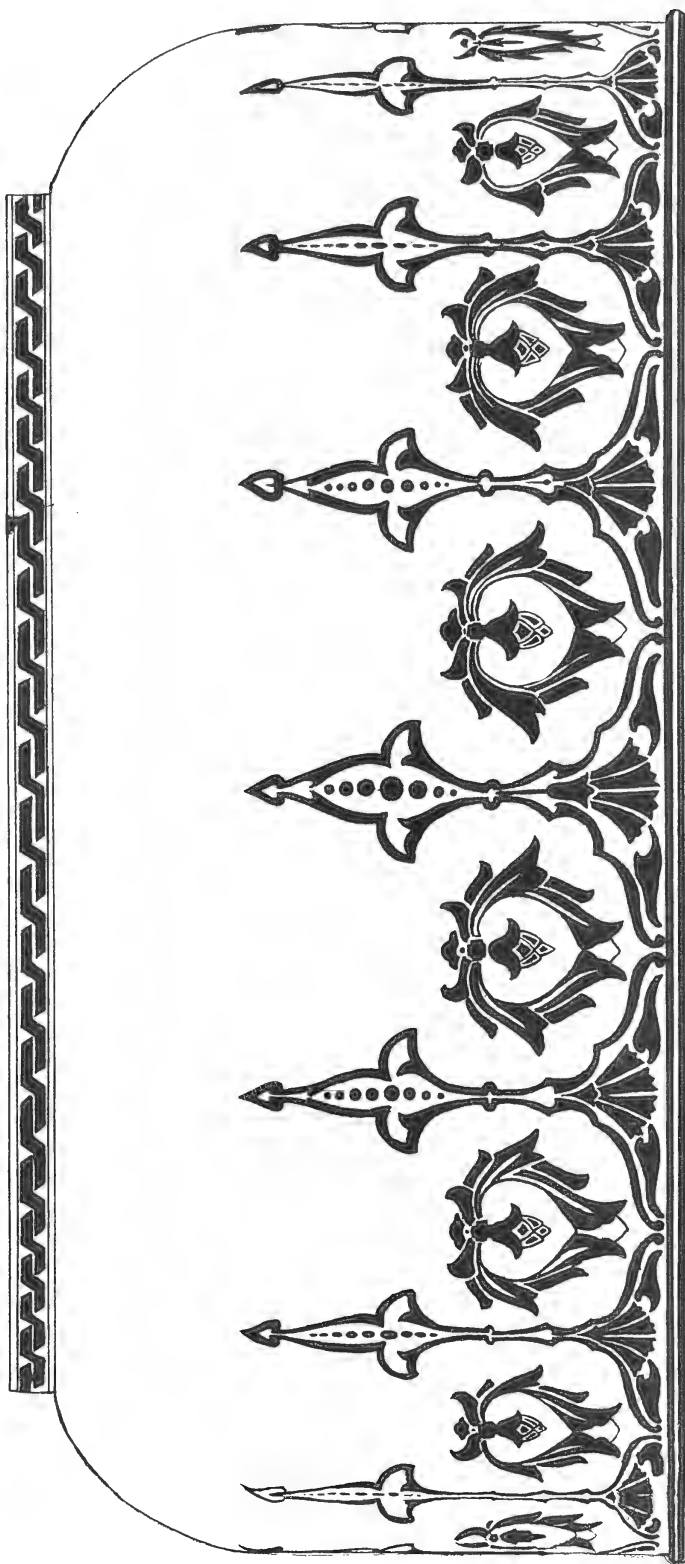
III. Problem. Same as Prob. II. Make six arrangements of landscapes in rectangles, in pencil, and mark best No. 1, next best No. 2, etc. In this problem use as many trees as you like, keeping simplicity in mind and remembering that every shape in the composition must be carefully studied as to size and contour. Nos. XXII and XXIII are correct solutions. Fig. XXIV, areas are too large and outweigh smaller ones. Fig. XXVI, the great number of small areas produce confusion, and the repetition of the same width in the trees and spaces between the trees, makes it commonplace. Fig. XXV, the road is too prominent and its direct movement to the corner places the interest there and tends to lead the eye out of the picture.

By thus doing these exercises, the creative faculty, the most precious gift to man, is developed and strengthened, and as this faculty is exercised by dealing with principles that underlie all art, we acquire a power and insight that will finally give us the key to all beauty.

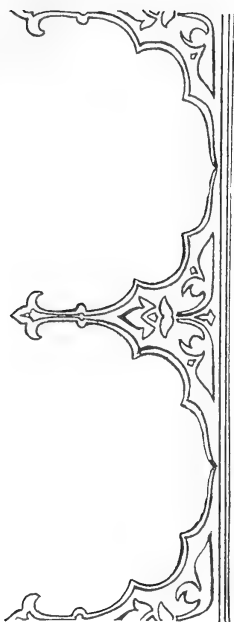


THE CLASS ROOM

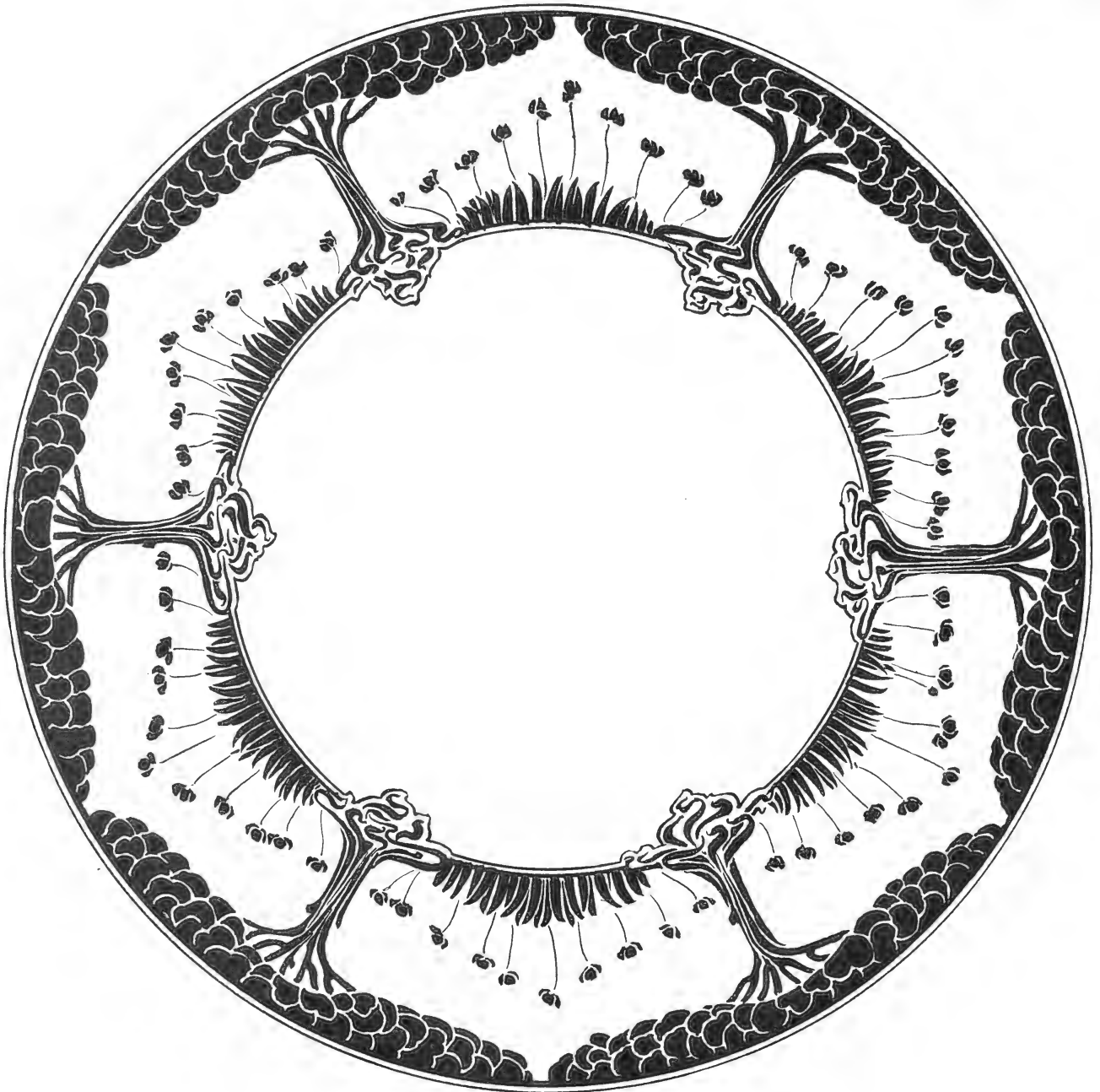
ALL subscribers wishing to follow the course of lessons on design by Mr. Froelich, may submit their best three solutions of each problem, to this department, signed by initials only. They will be criticized in the magazine so as to afford the mutual help of a class room criticism. This is an opportunity for study which should prove of great value to all serious students who have not the advantage of being near an art center. The work of one lesson will be criticised in the following number of KERAMIC STUDIO.



PERSIAN DESIGN FOR BOWL.—RUSSELL GOODWIN



THE ground of this design is a dull blue made by adding black to deep blue green and tinting to a medium depth. The ground of the border design both at top and base is a dull pink made by tinting with Carnation I or Pompadour with a touch of black. The narrow edge above and below both borders is in pale moss green. The scroll in design at base is same as body of bowl. Flower ornament in border is Pompadour or Carnation I medium dark. The leaves, calyx and dots below, also edge of bowl, are in body color with a touch of Dark Green 7. The flower medallion is same as flower in border, the center top petal being yellow and center yellow with green calyx, gold outlines and gold design inside.

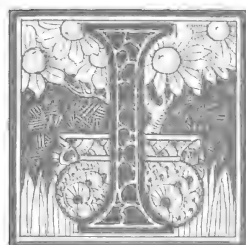


DESIGN FOR PLATE--FREDERICK H. RHEAD

UNDERGLAZE COLORS.—In drawing the design on the plate, it is only necessary to outline the shapes of the trees and the hexagon shape that is formed by the flowers. In painting the plate, a number 5 camel hair brush will produce the most satisfactory results. The color is to be well ground, to enable it to flow freely from the brush, as the design is intended to be drawn directly with the point of the brush and not to be “painted” or scratched on. The leaves

of the trees in a cold green, 5 parts French Green and 1 part Crimson, trunks of trees and stems of flowers Chocolate Brown, grass Olive Green, flowers Orange, lines at edges of plate Olive Green. A charming effect will be obtained when painting the leaves of the trees, if each mass of color is drawn towards the center in the direction of the trunk so the heaviest part of the work will show up the mass of color in front. This irregularity of color will prevent monotony.

THE GUILD OF ARTS AND CRAFTS OF NEW YORK



It was a most interesting exhibition which was held at the Guild House, 109 East 23d street, by the Guild of Arts and Crafts of New York. Mr. F. L. Thompson, of New York, showed some extremely handsome silver and gold mountings for bags, bonbon boxes, purses. The workmanship was very clever, both in the repoussé and in the flat, and also in the setting of stones. The designs were good.

Mrs. Froehlich of Pratt Institute, exhibited a few charming silver buckles, both plain and enameled and a copper oxide bowl showing broad treatment and exquisite workmanship. There was a silver chain made by her with dainty silver links enameled with dark red and a pierced repoussé silver buckle with green enamel that made one long to be the possessor.

Miss Peacock showed some clever articles, a small copper pot, with a simple design in the Greek key, and an exquisite tea strainer that was fine in form and cleverly finished; also a low silver dish and a charming belt buckle in copper with the design in dark blue enamel and several small pieces, all showing Miss Peacock's strong but simple designs.

Miss Haydock of Philadelphia, exhibited some interesting work in the form of chains, buckles and fobs and bowls, principally of copper oxide, making green tones in the design.

Christina Reade exhibited several articles in the copper oxide with and without enamel. There were several fobs and malachite buttons set in bronze, and a fob of bronze with black opal matrix set in, making a charming harmony in browns, reds and greens. Her designs seemed quite individual, as was the case of all.

Dr. Busck is the instructor in metals at the Guild House, and many small objects in metal were from the Busck studios showing nice forms and workmanship. Dr. Busck exhibited a copper covered casserole with design of three dolphins in relief, and from his studio was a copper scone and perforated brass lamp shades.

Mrs. Charlotte Howell Busck had some very fine wrought leather in different objects, the most important of which were a large chair, stool and unmounted design in calf. The chair was mounted in plain dark oak and copper nails, lines were straight and simple.

Miss Amy Mali Hicks, who has the department of design at the Guild House, showed a very handsome lacquered screen of carved leather with the iris design, Dutch metal laid on the leather, then painted and lacquered, giving the effect of the Chinese gilt papers. This lacquer will never tarnish. Miss Hicks' designs were seen all through the room, both of her own work and that of her pupils and followers, in leather and rug weaving.

Miss Holden exhibited a well designed and executed pierced lamp shade in brass, which covered a large low lamp made of pottery with an unfired decoration of red and black, rather Indian in character.

In the textiles, there were interesting designs in staining, batiks or dyeing by reserve, the original goods being kept away from the dye by different processes, either by twisting or tying or other means. The effect is most artistic and like many of the old oriental methods.

Amalie Busck Deady of New York, exhibited beautiful weavings in the forms of rugs and hammocks. There were

two pale yellow cotton rugs, with weavings of deeper yellow and neutral green that were very artistic and very reasonable in price, as were her green rugs of the same style.

Miss Marie Little, another clever weaver, who makes her own dyes, showed a large dull green rug, woven of corduroy, which was soft and delightful both to eye and touch. This had suggestions of design in the border of dull yellow and lighter green, making the whole very pleasant.

The School of Industrial Arts of Trenton, a free school, exhibited rugs designed by Miss Hicks which were well carried out in rather thick weaving of dull reds, browns and green. Miss Hicks makes her own dyes also and showed attractive weavings in the blues, greens and white.

Mrs. G. S. Ruggles, from the Mothers' and Daughters' Industry of New Hampshire, showed some charming rugs of plain weave; one in white with simple blue in spots, was very good indeed, so were those in the yellow tones.

In the basketry department the coil basket predominated, taking the form of the coil pottery.

Perhaps the choicest basket in the large collection was a tiny one exhibited by Miss Mary White, instructor of basketry at the Guild, the design of fish, made with raffia over rattan, Indian stitch, and the color scheme being silver white for the fish and grey green for the body of the basket.

Mrs. F. G. Loyd had several daintily formed baskets with black and red woven in, using the raffia over rattan and the Indian stitch, which gives a very fine weave, like the Alaska baskets.

Some corn, grass and husk coiled baskets were shown by Miss Sarah Frances of Plainfield, N. J. There were more baskets of this character than of any other.

There were many specimens of pottery, but only two or three pieces from each potter. Taft & Belknap were kind enough to loan pieces from Miss McLaughlin, Mr. Robertson (Dedham pottery) and Mr. Hastings, and also pieces from the Merrimac pottery and a few bits of Moravian pottery, with examples of Mr. Van Briggles' work. The latter's exhibit did not do him justice, as his work is individual and unique usually, and there was nothing extraordinary about the few pieces shown, they were rather good in form and were of the dull green enamel.

Mr. Volkmar showed a departure in his work, there being new forms partially made on the wheel and then finished by modeling in relief, dull green enamels and specimens of dull red or pink enamel glazes.

Miss Tourtelotte had two or three delightful little pieces of Trenton pottery with her incised designs and the dull glaze of green and brown intermingled, and a stein in blue and white.

Miss McLaughlin so far leads, her examples of hard fire porcelains being very choice and entirely different from anything shown.

The Kahler pottery from Denmark, was characteristic, seeming to speak of that far away country both in design and form. The glazes were ordinary, but the forms were simple and strong.

There were a few pieces of the Grueby in their usual dull green glaze and leaf like forms of modelling.

The Newcomb pottery was simple and good in tones of grey blues.

Mrs. Leonard and Miss Peacock, both pupils of Volkmar, exhibited a few pieces modeled by hand and some turned on the wheel.

There were exhibitors this year of overglaze decoration

on porcelain and only the design and technique were taken into consideration. This department was an innovation and from results we judge the Guild to be satisfied. Those exhibiting were Mrs. Mary Alley Neal, a few pieces in dull lustre; Miss M. Mason, a vase, bowl and plate, described in March number of KERAMIC STUDIO; Miss Catherine Sinclair, plates with simple designs in delft blue; Miss Peacock, cups and saucers and plates in simple designs of dark blue; Mrs. Leonard, plates and bowls, designs given in KERAMIC STUDIO.

The exhibition of bookbinding was an unusually fine one and was confined entirely to the Cobden-Sanderson school. The principal feature was "The Ideal Book," written by Mr. Cobden-Sanderson, printed at his press, bound in his bindery and decorated with his own design. This book was in the centre of one of the cases and was surrounded by books bound by Mr. Sanderson's pupils who have studied at least a year with him in the Dove's Bindery in London. All the pupils except one who have completed their course with him were represented. His American pupils showed beautiful bindings decorated with blind and gold tooling. All the books were distinguished by their simplicity, though one of Miss Preston's had a doublure elaborately gold tooled.



ROSE STUDY—(Supplement)

F. B. Aulich

FOR the study of La France Roses published with this number, use Aulich's Rose with some Turquoise Blue for the more distant petals and Albert's Yellow for the reflected lights. For the darker rose on the left hand Aulich's American Beauty Color.

Then take Blue Green for the right side of the background, mixing in Dark Blue, Olive Green and Black Green for the left corner, then let it fade off into Albert's Yellow and Yellow Brown in the foreground. The leaves are partly painted with Yellow Green, Blue Green, Olive Green and Yellow Brown, the stems with Crimson Purple.

Use the Rose very thin and delicate as it is a very strong color and needs a strong fire. If fired too lightly it will have a yellowish or bluish tint. The first fire should always be the hardest so as to have a good foundation.

For the second painting use a large brush and go over the whole surface with broad washes, using the same colors as before and blend all together with a pad, then take a pointed shader No. 5, dip lightly in turpentine or a little medium and wipe out the lights.

Take a No. 7 square shader and put in the depth with Rose for the roses, and a little American Beauty and Pompadour for the centers. Use some Grey for white roses for the turned over petals, and Yellow Brown for the reflected lights where the Yellow was used in the first painting. Shade the leaves with a mixture of Yellow Green and Yellow Brown in the foreground. With a so-called stemmer or long thin brush, shade the stems with Pompadour.

When almost dry put some powder colors on a palette, and with a little cotton blotter rub them lightly over all the parts you wish to soften or darken. If you want a special high glaze rub in some soft Flux over the entire surface before firing.

TREATMENT IN WATER COLORS

Rhoda Holmes Nicholls

The thin Whatman's paper is on the whole the most desirable for this particular kind of water color work; if placed on a sheet of wet blotting paper, it remains wet longer and

the quality is generally fuller than when painted on dry paper. The whole composition should be lightly drawn on with Rose Madder or Cobalt Blue, the local color of pink washed over the roses, while still wet the rich dark background floated in, bringing the wash down to the warm colors in the foreground. When the paper is covered, return to the roses, washing out the principal lights and as the color dries wash in the full darks of the center. The colors to use are Rose Madder warmed with Vermilion, and the shadows of the same colors grayed with Hooker's Green No. 2. The front rose must be more strongly painted than the other two, that is, the lights will be lighter, the darks less dark and the color less brilliant. The deepest darks are painted with Aligarin Crimson. The latter color is largely used in the deepest red rose. For the leaves in the foreground use Hooker's Green No. 2, burnt Sienna, raw Sienna, outline with some warm color like Aligarin Crimson and burnt Sienna. The colors in the background are Hooker's Green No. 2, with Brown Madder and Indigo, lift out some lights. This detail in the shadow gives transparency. The outlines of the roses are important. The drawing should not be slighted. It is the light masses of the roses which first catch our eye, and the form must be characteristic. The form of the leaves should be also well studied as well as the delicate stems.



DECORATIVE PANEL BY FREDERICK H. RHEAD

TREATMENT IN ENAMEL COLORS

Frederick H. Rhead

LET the work be as direct as possible, sketch the principal masses and draw the detail in color with the brush. The background to be a pale yellow green. The roses in the trees, and the skirt of the dress to be painted in a rich maroon. Paint the leaves round the roses, the dark stripes on the bodice and both the long and short grass, in a strong warm green. For the sleeves and the horizontal stripe on the bodice use a rich Old Gold or Orange. The poppies in the hair may also be painted in the same color. Limbs of trees in Van Dyke Brown. Stones and pebbles in three shades of Sage Green, almost approaching browns. Ribbons and collar in Turquoise. Perpendicular lines in center of bodice and dark masses in center of circles on skirt in Cobalt Blue. Leave lace and bands white and trace in brown. Scroll in ivory.

This design is very suitable for sgraffito or pyrography.

PYROGRAPHY TREATMENT

Kathryn Livermore

After outlining the figure, work out the background before any attempt is made at the figure, otherwise you will lose the values; be very careful to leave the outlines around the flowers clear and white, otherwise the drawing will be entirely lost; make them a flat brown tone, all the same, like a flat sepia wash. Keep the band back of the figure very light and delicate; as you work toward the foreground make the burning stronger and more decided. Work the figure out as indicated, keeping the gown very dark with the figures in same outline; make the line work in the bodice very carefully, as indicated.

If color is desired, use it entirely in the figure, leaving the background in the browns. Keep to the greens, blues and yellows, a pleasing effect; make the gown a dull blue with ornament in green and yellow ochre, introducing same colors in the bodice, scroll left in browns; also the face; flowers in hair to be blue and green.



THE CRAFTS

Decorative Panel

FOR
LEATHER, WOOD
OR ENAMEL
BY
FREDERICK
H. RHEAD

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various crafts are to be sent to the above address, but will be answered in the magazine under this head.

WROUGHT LEATHER

Charlotte Howell Busck



LEATHER being one of those durable materials that the moth and rust corrupt not, it behooves us to pause and reflect before we take even the first step. When the material one is working in is going to outlast one's own generation and be handed down to one's great grandchildren, one naturally hesitates about the sort of thing one is willing to perpetuate. This too, has the other and very attractive side that when one expresses oneself in some lasting medium, one feels the dignity of one's work, and it becomes the greatest pleasure to spend hours of thought and labor over it. First of all I cannot emphasize too strongly the



Portfolio, designed by Charlotte Busck, executed by Amalie Busck Deady.

value of good design, and not good design alone, but design that is fitted to the medium one is working in. For example, a natural arrangement of violets might be very charming in embroidery, but utterly unsuited to leather. Whatever medium the worker uses, he must realize that he is to a certain



Mat, grape motif, designed by Charlotte Busck, executed by Amalie Busck Deady.

extent handicapped by it. And in leather it is only by carefully considering its limitations, and in the adaptation of the design and the intelligent working of it that he can bring out all the possibilities of his material. Having then given much care and thought to one's design the next step is to put it on the leather. In selecting a skin there is always an element of chance, experience seems to count for little, no two skins tool alike, and the worker will find that every skin requires a different treatment.



Floor cushion, designed by Charlotte Busck, executed by Amalie Busck Deady.

The wholesale dealers are the most satisfactory to buy from, and calf and cow are the only skins that can be wrought. The design being drawn on manilla paper, the leather cut to the required size is dampened thoroughly, and when the water is quite absorbed the design is placed on top of the leather, the lines gone over with a bone tracer. This leaves a distinct impression on the leather which is now ready for the tooling. The tools used in wrought leather are similar to the reproussé tools, used in beaten metal. Indeed in my own work, I use the latter constantly whenever it is desirable to broaden a line or to get a bolder effect. I should advise the beginner to start with few tools, then as he progresses he will see what is needed to bring out the characteristics of the leather, in the texture of a leaf, the nobleness of a branch, etc., and by having these tools made from his own drawings, he will express himself more fully, and the work will be less stereotyped and mechanical than if he worked with the ready-made ones.

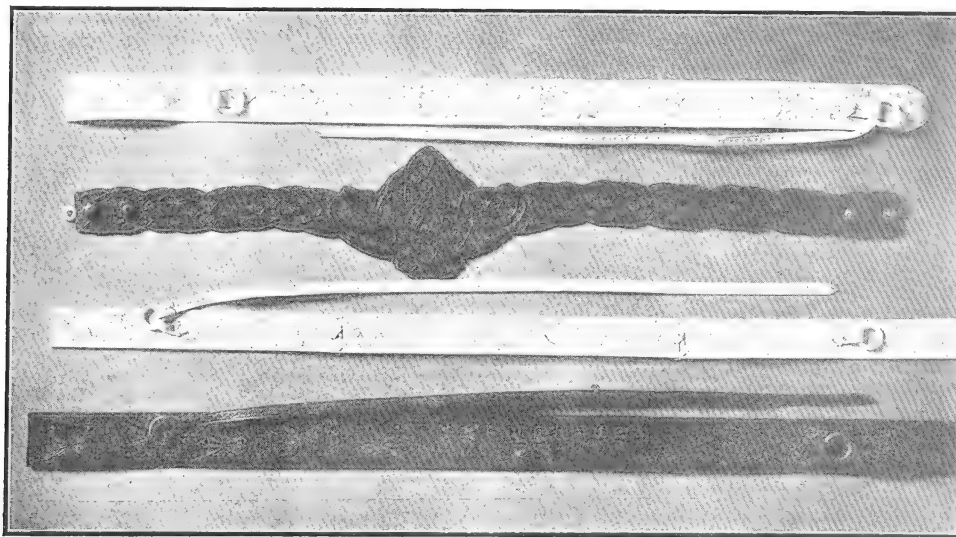
The tools that are absolutely necessary are outliners, small wedge shape, steel tools of different sizes, and two or three back-ground tools, a hammer and a stone to work on, a piece of marble will do, although a lithographer's stone is much better.

Keeping the leather always damp (a sponge and cup of water is convenient for this) one can now begin on the outlining. With the leather flat on the stone, the outline is pounded in with the wedge-shaped tools. The blows of the hammer must be uniform and of equal force, while the outlining tool is drawn along the line toward the worker with a sort of rocking motion. On the character of this outline depends in a great measure the effectiveness of one's work. It should be perfectly even and deep enough to make a very decided depression in the leather. The quality of the leather will first be tested here; unless the skin be a perfect one, Russia calf is very apt to show a light streak where it is tooled. Cow never does this, and owing to the thickness of the hide, can be deeply tooled, and with the background hammered down gives a much greater relief than one can get in calf, although it has not equal beauty of surface. White calf makes a very charming material to work on, but it is hard to



Chair, designed and executed by Charlotte Howell Busck.

find, and one must be wary of the alum tanned skin which curls up and turns yellow as soon as it is touched with water. The sumach tanning is, however, perfectly satisfactory. When the outline is finished, the forms can be slightly modelled by working them up from the back with a steel modelling tool, or one of the outlines can be used for this. Then the work is



Belts, designed by Charlotte Busck, executed by Amalie Busck Deady.

ready for the background; here one's ingenuity comes into play, in the combination of different tools, using the tool close, or dolting it in, letting the background follow around the outline and leaving untooled spaces. These combinations and many others will suggest themselves to the worker as he progresses. In the same way he will see what forms his tools should take to bring out the quality of an acorn cup, or of a pine cone, the curled edge of a leaf, etc. There is no doubt that if color be used with discretion, it brings out the design and adds much to the effectiveness of the work, but above all things let there be no suggestion of *paint*. A method of my own which I have found very satisfactory, is to use oil-color rubbed into the surface of the leather with the finger, allowing it to stay for an hour, then going over it with wax. The wax should not be put direct on the leather, but held between a piece of cotton cloth. It is then rubbed down with a soft cloth until it takes a polish, which brings out the color and also protects the leather.

I should like to repeat what I have just said about painting or in any way covering the surface and concealing the leather. When this is done one might as well have worked on canvas or a piece of wood. It is well to keep in one's mind, first, last and always: *Leather*; and the more one's work brings out the characteristics of the material, the more artistic and beautiful will the finished piece be.

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ARTS AND CRAFTS EXHIBITION AT SYRACUSE

This exhibit, give under the auspices of the United Crafts, Syracuse, N. Y., and held in the fine Craftsman building in Syracuse, was exceedingly interesting. An article on the potteries exhibited will be given in June, owing to lack of space in the May number.

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THE YEAR'S COMPETITION

[Continued from Page 2]

THE NATURALISTIC STUDY COMPETITION

"As a whole the work lacks breadth and dignity. Too much attention has been paid to making the details, the little things prominent. We ought to have detail and careful drawing, but it must not be so prominent as to destroy massing.

A second criticism is, that most of the sketches are sweet and pretty. They lack individuality. To explain this is very difficult. The representation of the figure, landscape, or flower is useful, even interesting, but not necessarily art. A photograph of the same will do as much. Scores of artists have treated these subjects; but only those who, by their training or power of insight can feel and express certain truths and beauties, have produced works of merit. It is the painter's point to view. It is his mission to translate invisible terms, truths and beauties hidden from the untrained. There are numberless landscape painters, but only those of strong individuality have produced work that will last. The tender gray of dawn has been attempted by many, but none has given us the kind of beauty of refinement of Corot. His trees are not vigorous and forceful. On the other hand Rousseau's trees contrast sharply with Corot's. He felt the strength, the bigness and solidity in nature. And yet these men worked in Barbizon from the same landscape. Other painters could paint trees but they did not express a certain quality as did Corot, Rousseau, Innes and other painters of note. It is hardly to be expected that we find artists of Corot's quality among our workers, but we must develop what individuality we have. All of us have it. If our work does not compel the attention

of the observer, give him genuine pleasure in viewing it and insist on being remembered afterwards, it is not strong work.

"The third criticism is, that nearly all of the sketches lack composition. The movement of line, the placing of masses, the consideration of parts directly influencing each other, have not been well managed."

HUGO FROELICH.

[We have given both favorable and adverse criticisms of designs for composition as an object lesson to our readers. They will find that the higher one stands in art, the more ready to accept criticism, for the great lesson has been learned that the world's greatest artists are not *always* right and at their best.—Editor.]

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ANSWERS TO CORRESPONDENTS

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

J. R. H.—If your china is sufficiently fired the glaze should be uniform and fully as bright as the white china. The pinks will be yellowish and the ruby brownish, if under-fired, some times purplish if thin. Probably you did not fire hard enough. If you find that your pink comes out too pale when you use flux with it, you had better use it clear, usually one adds one-fourth flux, probably the trouble is in the firing. Rose or Pink needs a medium hard fire—not too hard or it will be bluish. Be careful always to use perfectly clean brushes and palette knife as this color is easily tainted. We do not know whose make of Pink you use—possibly it is not a good make.

For painting little roses you can make the first wash of Carnation 1 or 2 or Pompadour, according to the tint of pink you wish. For the second painting wash Rose over the Carnation, whatever Rose you are in the habit of using, or Carmine or Pink. The different makes of Rose are generally preferable to Carmine or Pink.

E. M. H.—Lustre colors are put up in vials like the liquid bright gold and are all much the same brown color, some being blackish before firing. There is quite a variety of color effect to be obtained by washing one color over another which has been fired. The colors have a metallic lustre and are used only in conventional decoration; not for painting naturalistically. It is used just as it comes prepared in bottles, thinning with Oil of Lavender if it thickens too much. Ivory glaze and Lavender glaze are used to give a uniform tone by dusting over the entire painting, when finished. They are composed largely of flux and give a higher glaze than the ordinary colors.

Mrs. W. F. C.—There is no book of Tojetti Cupids, you will have to pick them up here and there in photographic collections. Try the Soule Photograph Co. of Boston. If your purple has no glaze we should judge it was not fired enough as purple needs the hardest fire of all colors. We should advise washing lightly with flux and firing harder than before.

Mrs. B. K. F.—If you cannot get a glaze on your china after firing, four hours, we should judge that you have not sufficient draft, that is if you are sure you have sufficient force of gas. Have a good mason examine your chimney. Sometimes adding a length of pipe on top of the chimney improves the firing if the neighboring houses are higher.

L. E. P.—If your raised paste for gold rubs off in powder, it is under-fired; if it scales off, it must have had too much oil of some kind; it should dry perfectly dull before firing. Do you breathe on your paste before mixing in turpentine or lavender. That gives often enough moisture to correct the oily appearance. If this is not the trouble with your paste, perhaps the addition of a very little flux will help, or fire harder. It is difficult to be sure what the trouble is without seeing the paste mixed and put on. The only thing you can do is to go over the places where the design has clipped out with Dresden aufsetzweis in tubes. After firing this can be gilded the same as raised paste but will burnish with a higher polish.

Mrs. A. B. B.—If you are using the fish design conventionally you can use burnish silver on the scales; this can be bought prepared the same as gold or in powder. If you are painting use a thin wash of blue in place of silver.

Mrs. C. E. M.—The usual cause of spots on lustre is dust. If exposed even for a short time dust will collect. Always wipe off with an old silk handkerchief just before firing. Moisture sometimes settles on flat pieces if the draft is not good, and causes spots.

G.—Decorative pieces for cabinets and the table should always be treated conventionally, that is they should never be painted naturalistically. Painting is not decoration. Naturalistic painting should be put upon panels or plaques, framed and hung on the wall. Silver lustre is not new, it can be obtained of any dealer in lustres. The little stands under so many pieces in the New York exhibit are of Chinese teak wood. They can be obtained of Vantine, New York, or in San Francisco or any place where Chinese and Japanese things are sold in any quantity. They vary in price according to size and elaborate carving, from fifty cents to five or ten dollars, some times more.

It is difficult to suggest a design for toilet set when the shape is unknown, but it would seem that a conventional adaptation of some flower subject would be most appropriate, in which case you can use any color scheme you wish. The design by Miss Soule in this number would be very effective.

KEEP THE FIRE ALIVE.

KERAMIC STUDIO

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR.

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Some Leading Agencies of Ceramic Studio.

We take pleasure in mentioning a few of the leading agencies for the sale of the CERAMIC STUDIO, where, also, subscriptions may be placed:

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KERAMIC STUDIO

Vol. V, No. 2

SYRACUSE NEW YORK

June 1903



WHEN once the initial step is taken, it is a matter of a very short time before everything seems to be running in the same direction. It is only a short time since Mr. Volkmar started his class in pottery in Mrs. Robineau's New York studio, and now everyone is studying the manipulation of clays and glazes. Mr. Binns opened his summer school shortly after Mr. Volkmar's class had begun. Then Mrs. Vance Phillips added pottery to her summer school, and Mr. Volkmar opened his pottery to summer students. Mr. Dow includes pottery work in his Ipswich summer season's work and many individual china painters are working out the pottery problems for themselves, Mrs. Poillion, New York; Miss Mary Chase Perry, Detroit; Marshal Fry, New York, and Mrs. Robineau, Syracuse, among others. It is not like this fad or that, it is a serious movement and ought surely to bring about some worthy result since it calls for too hard work and too many risks to be degraded to the level of fancy work as it becomes more popular. Before this movement started the individual artist potters in the United States could be counted on the fingers of one hand—almost—Miss McLaughlin, Mrs. Frackleton, Mrs. Irelan, Mr. Volkmar, Mr. Robertson and the freak potter Ohr, possibly a few others; we feel safe in predicting that a very few years will add appreciably to their ranks from among the china painters.

FOR BEGINNERS

Anna B. Leonard

TO APPLY designs to keramic forms first look for the structure or the skeleton upon which the design is built, then consider how it fills the space given and how it may be applied to the desired space. Take a simple repeating design in a border for instance. The design may be seen in a band on a low bowl and the decorator may wish it on a tall vase; the first thing to do is to space off the vase in good proportions, the border being in good proportion to the height of the vase. Here to begin with, is the important question of space division. When the width of the band is decided upon, then the next step is to find how many perpendicular divisions shall be made to accommodate the repeating design.

A "plate divider" is invaluable and assists the decorator at once in adjusting spaces by placing the vase directly in the center of the divider and drawing the lines up the sides of the vase, whether one wishes twelve parts or ten or eight (or any more or less numbers.) All this may be done quickly instead of by laborious measuring used before the invention of the "plate divider."

If a part of the design may be directly transferred into one of these spaces marked off, so much the better, but if it has to be changed a little to fill the space correctly, then one-half of the portion of the design may be drawn and when that is perfectly satisfactory it may be drawn on tracing paper and then the paper folded and the other side drawn to get both sides or portions symmetrical (if it is a symmetrical design.)

This tracing then will represent the entire figure that is to be decorated, and this is repeated in each portion until the border is completed.

A pencil drawing may be made over the faint tracing left on the china to correct any fault, but if one is experienced an outline of color or gold or paste may be used directly, correcting as one works; but even the best and most experienced workers prefer to get a good and satisfactory drawing in the beginning, facilitating very much the work that follows.

One should be most careful in getting beautiful lines, lines that cut the spaces in two beautiful portions, the portion that makes the design and the portion that makes the background. It is an excellent idea to hold the object before a mirror and then criticise the shape of the dark spots and then the light spots. Of course in tracing without the carbon paper, the object is first rubbed with turpentine and dried.

By putting the pencil drawing of the tracing paper next to the china and going over the back of the design with a hard point, either a sharp agate burnisher or sharpened orange stick, the pencil marks will be transferred to the china.

It is better to first try some simple designs on a plain plate or saucer, until one has a little experience.



NATIONAL LEAGUE OF MINERAL PAINTERS

THE annual meeting of the National League of Mineral Painters was held on May 7. The principal business was the election of six new members of the Advisory Board, which resulted as follows: Mrs. K. C. Church, San Francisco; Miss Bayha, Kansas City; Miss Perry, Detroit; Miss M. M. Mason, New York; Miss Ehlers, Jersey City; Mrs. Davis, Boston.

The subject of how the current exhibition should be judged brought out many interesting remarks, and it was unanimously voted that the judging should be done in New York, and that judgment should be accepted as final in the matter of awards. The judges selected were Miss Amy Mali Hicks, New York; Miss Blanche Dillaye, Philadelphia; Mr. Peter Roos, Boston.

The marks in the competition on educational lines were awarded as follows, the highest marks being given for the carrying out of the three problems; design for tile, design for pitcher, candlestick in clay. Mr. Rockwood Moulton, Brooklyn, sent all three, and stands 1st, receiving the gold medal and scholarship; Miss I. A. Johnson, tile, pitcher, stands 2d, silver medal; Miss Peacock, tile, stands 3d, bronze medal; Miss Welch, tile, pitcher, 4th; Miss Lienau, tile, 5th; Mrs. Mayhew, tile, 6th; Mrs. Andresen, tile, 7th; Mr. Simmons, tile, 8th.

The following were commended by the judges for design, adaptation to form, drawing and color:

BOWL—No. 19, Marshal Fry; 20, Marshal Fry; 27, Mrs. Sarah Wood Safford; 21, Marshal Fry; 29, Miss Mason; 22, Mrs. Mayhew; 18, Mrs. Fry.

VASES—No. 4, Marshal Fry; 16, Mrs. C. A. Pratt; 14, Mrs. S. E. Price; 9, Miss Foster; 3, Mrs. De Witt; 10, Mrs. L. I. Harrison.

PLATES—No. 41, Marshal Fry; 40, Marshal Fry; 103, Marshal Fry; 52, Mrs. S. E. Price; 34, Mrs. Chas. Cooper; 31, Mrs. Chas. Cooper; 39, Bertha L. Davis.

IDA A. JOHNSON, President.

GRAND FEU CERAMICS

Taxile Doat

II-SÈVRES AT THE PARIS EXPOSITION OF 1900*



THE Sèvres Exposition of 1884, where for the first time were grouped reds of copper, fixed blues and enamels rivaling the palette of Chinese ceramists, was quite sensational, but at no time before 1900 had the factory shown in its decennial (now quinquennial) exhibitions such an ensemble of varied ceramics, new shapes,

complex technique, and works of art by the most celebrated talent. And at no time had the Laboratory met with such a succession of fortunate discoveries, whether accidental or scientifically deduced.

It must be said also that at no time the vogue for ceram-

*Lack of room and the large number of illustrations prevent us from giving Mr. Doat's second paper complete in this number. It will be continued in July issue. As it was impossible to take direct photographs of all the pieces illustrated, so many having been dispersed, some of the illustrations are reproduced from "La Manufacture de Sèvres en 1900," published by E. Levy, 13 rue Lafayette, Paris.

ics had been so strong and outside influences so stimulating, and never had just or prejudiced criticism so persistently assailed the State factory, which was even threatened with suppression. A successful exhibition was absolutely necessary.

As the Ministry of Finances refused additional credit, the Sèvres administration went to work on its own resources. The first plan was the construction of an Exhibition Palace in grès outside, and porcelain inside, which, built in the center of the Champ de Mars gardens, would contain the products of the factory. Grès, which, since the works of Carriès, the regretted master, had conquered not only cultivated minds but the popular favor, was adopted in order to show the possibility of applying on a large scale this first class ceramic material to the construction, and to the inside as well as outside polychrome decoration of modern residences. Had not the Chinese built in Nankin a porcelain tower?

Lack of funds prevented the carrying out of this great original plan. It was decided that only a fragment would be executed as a demonstrative piece. The sculptor Coutan, member of the Institute, and director of the works of art of Sèvres in 1894, took charge of the work. Keeping for himself the sculptural part which symbolises the Arts of the Fire, he secured the collaboration of the architect Mr. Risler, and with the help of the personnel both executed the external part of



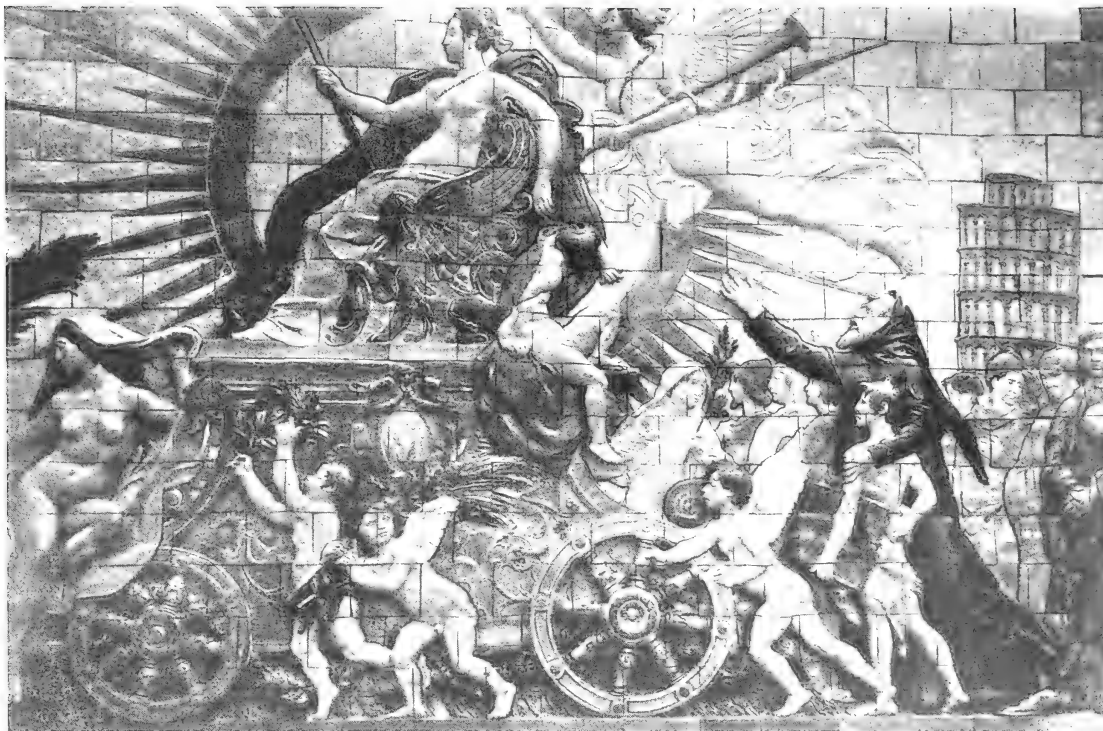
Large piece in grès, a part of the decoration of the Ceramic Palace fragment. The largest piece which has been made in stoneware, with the exception of large oil jars made by the Spaniards.



Fragment of the Ceramic Palace in grés, decorated with the whole palette of new grand feu colors. Size 11.70 by 9 Met.



Frieze in grés, part of the Ceramic Palace fragment.



The Italian Renaissance. Fragment of the large frieze in grès of the Palais des Beaux Arts, sculptured by Barrias after the designs of Joseph Blanc. The tiles are 0.25 by 0.20 met., (about 8x9 inches.) The frieze represents the History of Art, Assyrian Art, Egyptian Art, the centuries of Pericles, August, Leo X, François I, Louis XIV, Napoleon I, and the modern republican period.



Monumental fountain in grès, decorated with crystalline glazes. After the designs of Mr. Sandier, the Director of Works of Art of Sèvres.

this fragment of the Ceramic Palace, the dimensions of which, about 38 feet high and 31 feet wide, were very imposing.

This construction could not be undertaken with the known materials and a special grès was necessary, of a more common and less expensive clay than porcelain, but easier to work and fire than the stoneware of Provence, of the Beauvaisis or of the Rhine country. Mr. Vogt, the technical director, solved the problem by inventing a grès of very fine paste, yielding easily to the thumb of the sculptor, keeping a long time its dampness, easy to throw and model, impervious to water and consequently not liable to crack, resisting strong pressure, receiving well the most varied coloration, and, most

frieze of the Palais des Beaux Arts, *The History of Art*, the designs of which had been made by Mr. Joseph Blanc of the Institute. The sculptor Barrias executed in relief this large composition, an apotheosis of Art since prehistoric times, and at the proper time the 4,500 pieces, covering a surface of over 400 square yards, left the kilns to play their part in the decoration of this monument consecrated to Art. The figures are in relief on a turquoise background and display the wonderful variety of grand feu colored glazes.

Another important work was a monumental mantel-piece over twenty feet high, ordered by the Minister of Beaux Arts and executed by Mr. Sedille, and which showed that grès cérame, created for outside architectural decoration, was also very suitable to the more delicate interior decoration.

While these architectural works were being carried out, the chemists completed the series of colored glazes, of grand feu colors over and under the glaze, red, blue, yellowish green, brown and black, the crystalline glazes which had been so successfully used at Copenhagen, and gradually the muffle firing was entirely replaced by the grands feux, rapid, rational, the only ceramic firing. However at this same time the old porcelaine tendre was reconstituted, with its rich translucent enamels (domain of muffle firing).

In 1895, Mr. Coutan having resigned, Mr. Sandier became Director of the Works of Art. He discarded all the old forms which had become unpleasant because they had pleased too long, and replaced them by a number of new shapes of all sizes. For decoration, he substituted for the illogical principle of covering with opaque colors the white surface of the porcelain, the more sensible one of using colors only to bring out better the brilliancy of the white and precious clay.

After his own designs, he directed the execution of a monumental grès fountain, of more than 30 feet at the base, with a main column over 20 feet high, rising from a large basin, above which are three dancers by Mr. Boucher. A combination of many small basins and columns decorated with turtles, fishes, shells, water lilies, etc., and covered with the richest crystalline glazes, produced with the play of water a most pleasing effect.

[TO BE CONTINUED.]



NASTURTIUMS—(Supplement)

M. M. Mason

FOR first firing the nasturtiums are painted with Yellow Red for the light ones, Carnation for the deeper ones, and Blood Red with the addition of a little Ruby for the darkest flowers. The dark markings are put in with Carnation in the light flowers and Blood Red and Ruby in the darker ones.

The background is laid in with Albert Yellow, Yellow Brown, Black Green and a little of the deepest flower color.

When dry, the paint is dusted with the same colors used in painting, allowing some of the Blood Red to go over the leaves.

Retouch the yellow flower with a wash of Albert Yellow. The same colors used in laying in are used for strengthening and modeling the others. The same colors are also used in retouching the leaves as were used in the first painting, with the addition of a little Yellow Brown in places.

It is desirable to keep the color scheme as brilliant and glowing as possible, using washes of Yellow Brown, Black Green, Carnation and Ruby.

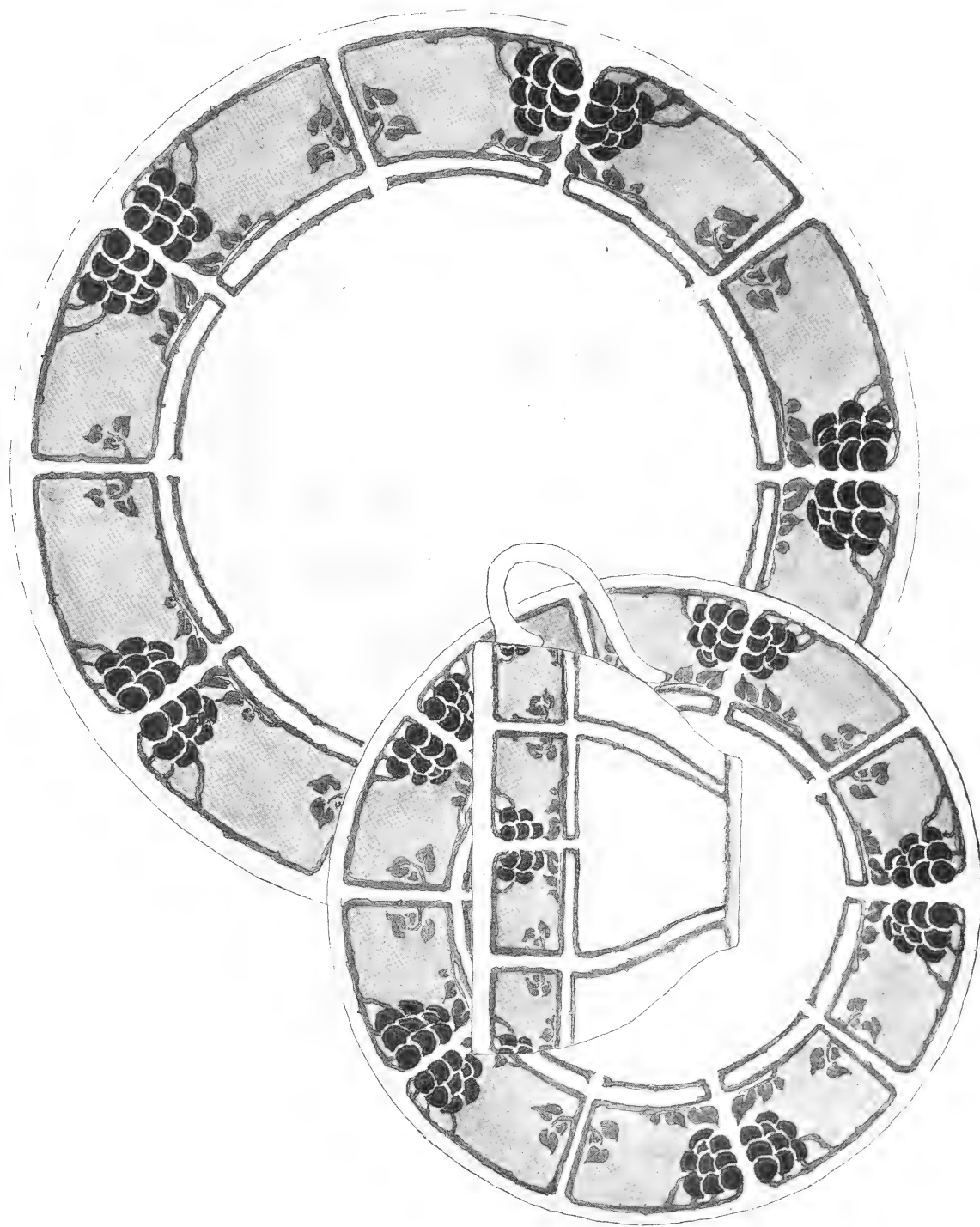


Mantel-piece in grès in the Museum of Decorative Arts, Paris.

precious quality, making possible the execution of large pieces. This point being acquired, there remained to find the mat or semi mat glazes and the enamels, which firing at the same temperature as this new material, would make a harmonious whole with it, without any danger of crackling and scaling. This was the work of the chemist Mr. Giraud.

After numerous experiments and trials, the architectural fragment enriched with the flammés and crystallized effects of the new grand feu palette, was piece by piece erected on the Esplanade des Invalides.

Having heard of the creation of this new material, the architect Mr. Thomas asked the factory to model in grès his



SECOND PRIZE, COMPETITION DESIGN—MARGARET OVERBECK



JUNE, 1903

SUPPLEMENT TO
KERAMIC STUDIO

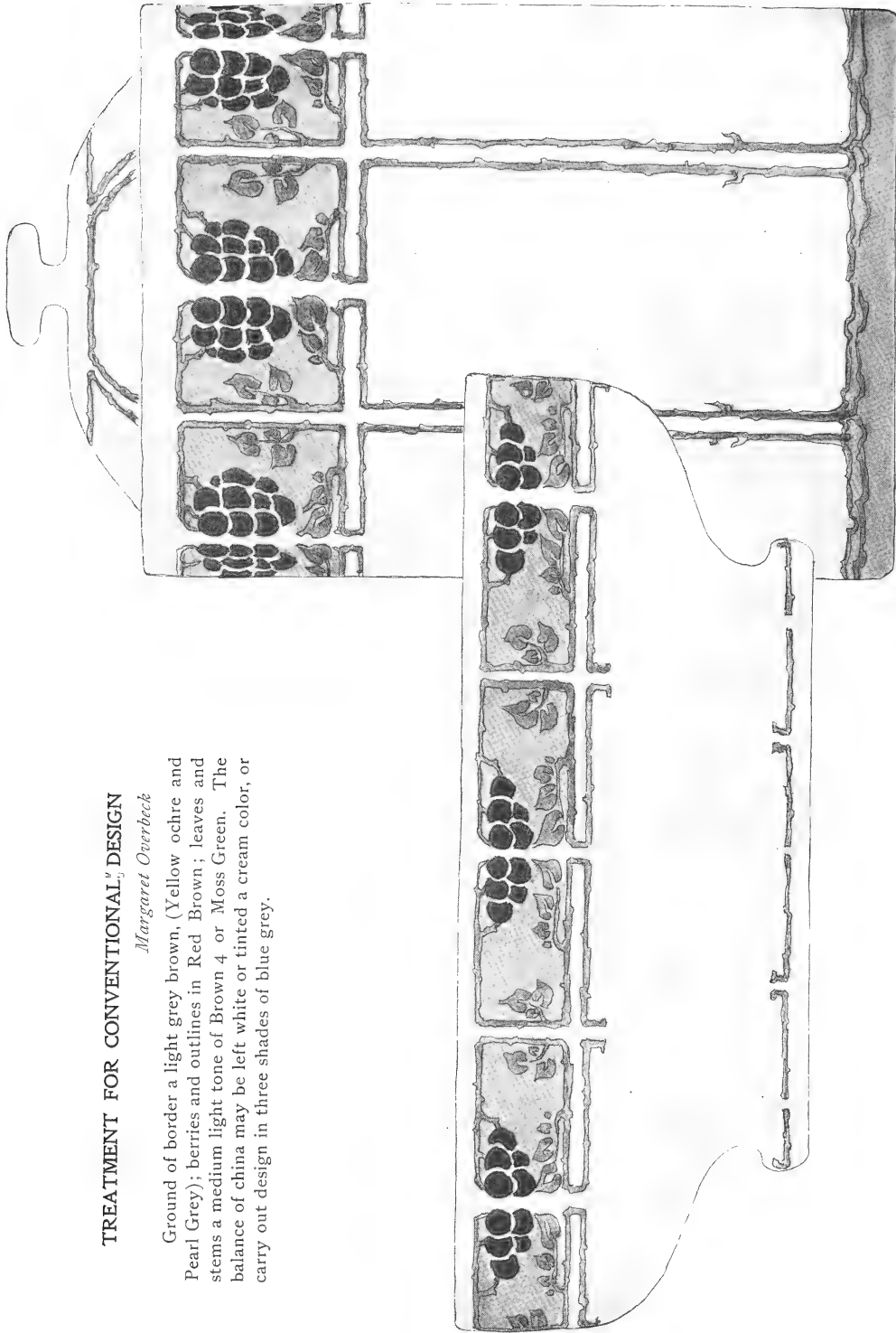
NASTURTIUMS—MAUD M. MASON

PHOTO CHROMOTYPE ENG. CO., PHILA.

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KERAMIC STUDIO PUB. CO.
SYRACUSE, N. Y.

TREATMENT FOR CONVENTIONAL^y DESIGN*Margaret Overbeck*

Ground of border a light grey brown, (Yellow ochre and Pearl Grey); berries and outlines in Red Brown; leaves and stems a medium light tone of Brown 4 or Moss Green. The balance of china may be left white or tinted a cream color, or carry out design in three shades of blue grey.



POTTERY AT THE ARTS AND CRAFTS EXHIBIT
CRAFTSMAN BUILDING, SYRACUSE



TAKEN altogether, it is doubtful if a more representative crafts exhibit has been made anywhere in the U. S. and certainly nowhere has such an exhibit been seen against so fitting a background as the one recently held at Syracuse, The Craftsman building being finished throughout in the severely simple style of the crafts movement. We have space

here only for a short review of the pottery, though the work in the other crafts was all extremely interesting.

The display of Rookwood was as beautiful as always, and Grueby showed some interesting new tile work, but we expect to review their architectural faience in a later article and wish to speak here rather of the individual potter's work and of the newcomers in the field.

The Van Briggle Pottery is perhaps the most important of the new work. The shapes, modeled decorations and color are simple and artistic, the body, a faience, firing probably at about the same temperature as Rookwood. The glaze is mat, similar to the Grueby effect, but showing rather the coloring of the Rookwood Iris ware. It is, however, quite individual and relies more on modeling and general color effect than on local application of design in color. The motifs used are usually floral forms simply and gracefully conventionalized. Mr. Van Briggle obtained his knowledge of pottery in this country and increased his art in the studios of Paris and the foreign potteries. His work promises to add appreciably to the reputation of American faience. The pottery has been running for a little over two years, and already has gained quite a reputation among lovers of ceramic art.

Newcomb College sent a number of interesting pieces of pottery executed by pupils, the vases decorated in dull blue on a greyish white ground being rather more attractive than those with the olive green tones, the designs are all good and we regret that no photographs were taken of these that we might show them to the readers of KERAMIC STUDIO.

The Miami Pottery is the product of the Dayton (Ohio) Society of Arts and Crafts. It is made from an ordinary yellow clay, found in the valley of the Miami River, and fashioned by hand into simple shapes, and sometimes decorated with modeling in low relief. The chief interest, however, lies in the character of the glaze, which in the most successful pieces, is of a rich dark bronze color, full of life and having a



Van Briggle Pottery Co., Colorado Springs.

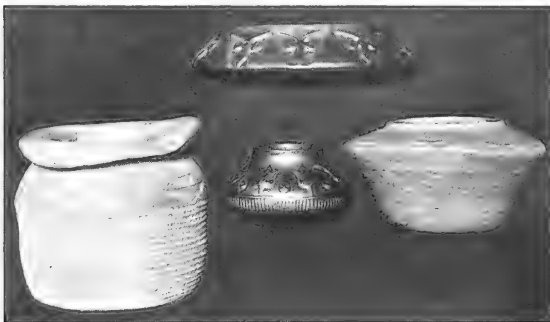
soft, luminous quality in its mat surface, which is distinctive of the work.

Miami pottery is not the product of experienced craftsmen or accomplished artists. It represents, for the most part, the efforts of young students in the handicraft classes of the Dayton Society, which is under the direction of Forrest Emerson Mann.

As can be seen from the cuts, the designs are unique and artistic, and the work is altogether unusual from amateurs.

Mrs. S. S. Frackleton sent a few pieces of her blue and grey stoneware, which has already been noticed in KERAMIC STUDIO.

Miss M. Louise McLaughlin was well represented and showed some experiments in color and inlaid glaze both white and colored, that were very interesting. The clay is cut out in openings which are then filled with glaze. As yet she has no rival in this country in the making of true porcelain. The only criticism that we would make is that the relief decoration is sometimes a little heavy and not always interesting. But we understand that she has been applying her energies rather to the technical perfecting of her bodies and glazes. She writes in a recent letter: "Inlaid glazes white and colored, and trials of varied color effects in decoration is what I am working on. Now that I have settled upon a body and glaze which suits my purpose, and have learned how to fire it, I feel the more free to work upon schemes of decoration. New



Miami Pottery, by Mrs. J. B. Thresher.



Miami Pottery, by William Cochrane and Albert Loose.



Cider Set, by Charles Volkmar. Settee by Gustave Stickley.
[Courtesy of The Craftsman.]

possibilities and suggestions are always coming to one, and that forms the inexhaustible interest of the work."

Mrs. Poillion had a large exhibit of ware, mostly articles of utility, jardinières, window boxes, tree tubs, flower pots, etc. The designs were good, the body, as yet, is not very interesting artistically, but Mrs. Poillion deserves much praise for the progress already made.

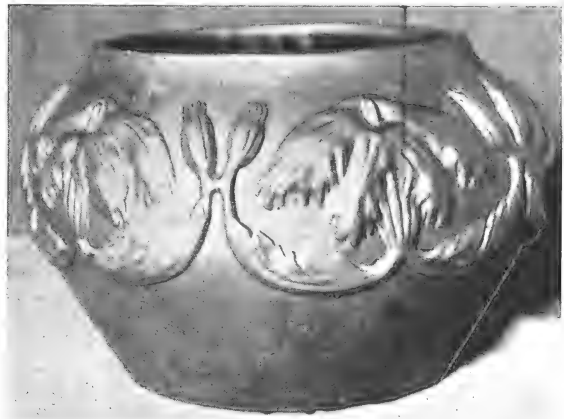
Mr. Charles Volkmar's work is so well known that it needs little comment, the colors, shapes and glazes, both mat and brilliant, are simple and artistic. The cider set illustrated is in a mat green and goes well with the crafts furniture of Mr. Stickley.

Mrs. Alsop Robineau's exhibit was of experimental pottery showing several different bodies and glazes. The best piece was a little vase at the right of the illustration, a grey

blue porcelain body fired at about cone 8. It has a finely mottled color and is finished with a polish and no glaze. The low vase with *pâte sur pâte* decoration of cowslip in white on a deep cream ground is the same body, with a glaze. The other two dark pieces are faience fired and glazed at cone 6.

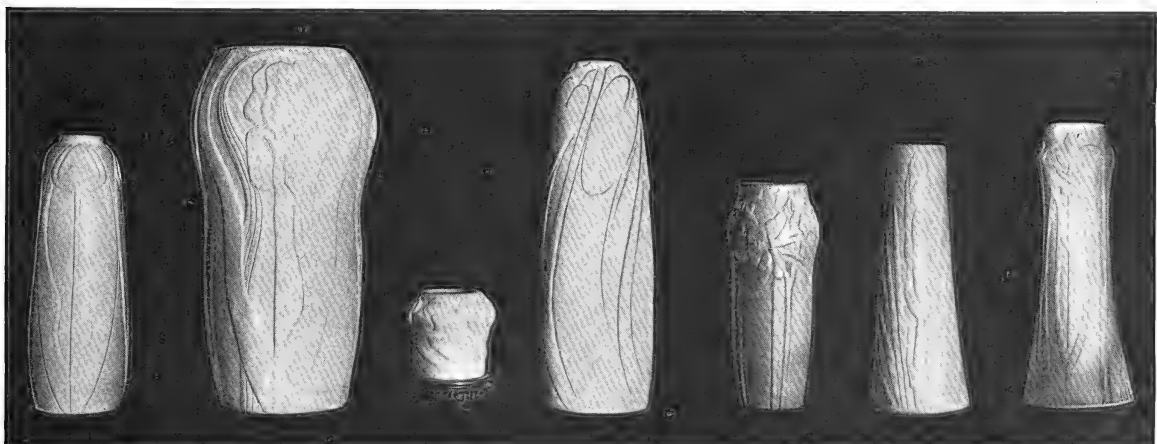
CASTING

The chief interest of Mrs. Robineau's exhibit lies in the demonstration that it is possible to use the casting process without losing individuality and the personal touch. With stoneware or a soft pottery body (faience), building entirely by hand and turning on the wheel are the more interesting methods of making forms. The necessarily heavy effect ob-



Miami Pottery. Jardinière, by Mrs. J. B. Thresher.

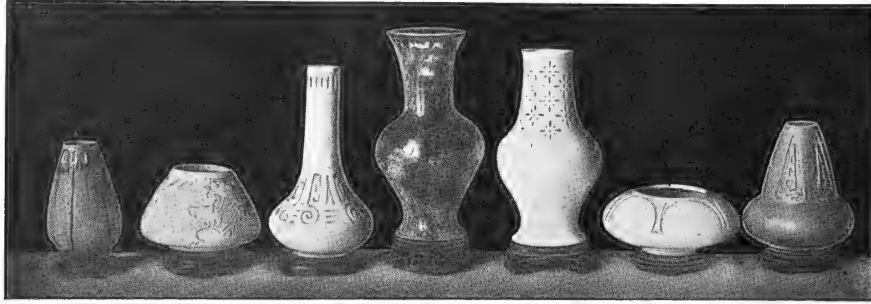
tained, suits well the material; but in working for a porcelain body a more delicate effect is desirable; this cannot be obtained wholly with the hands, nor is it reasonable to spend days to accomplish what with proper aid can be done in a comparatively short time. To the end that she may design her own forms and yet have this necessary aid, Mrs. Robineau has had a number of moulds made from drawings, each mould combining two or more different curves, so that when a new shape is desired she can take part of one casting either alone or in combination



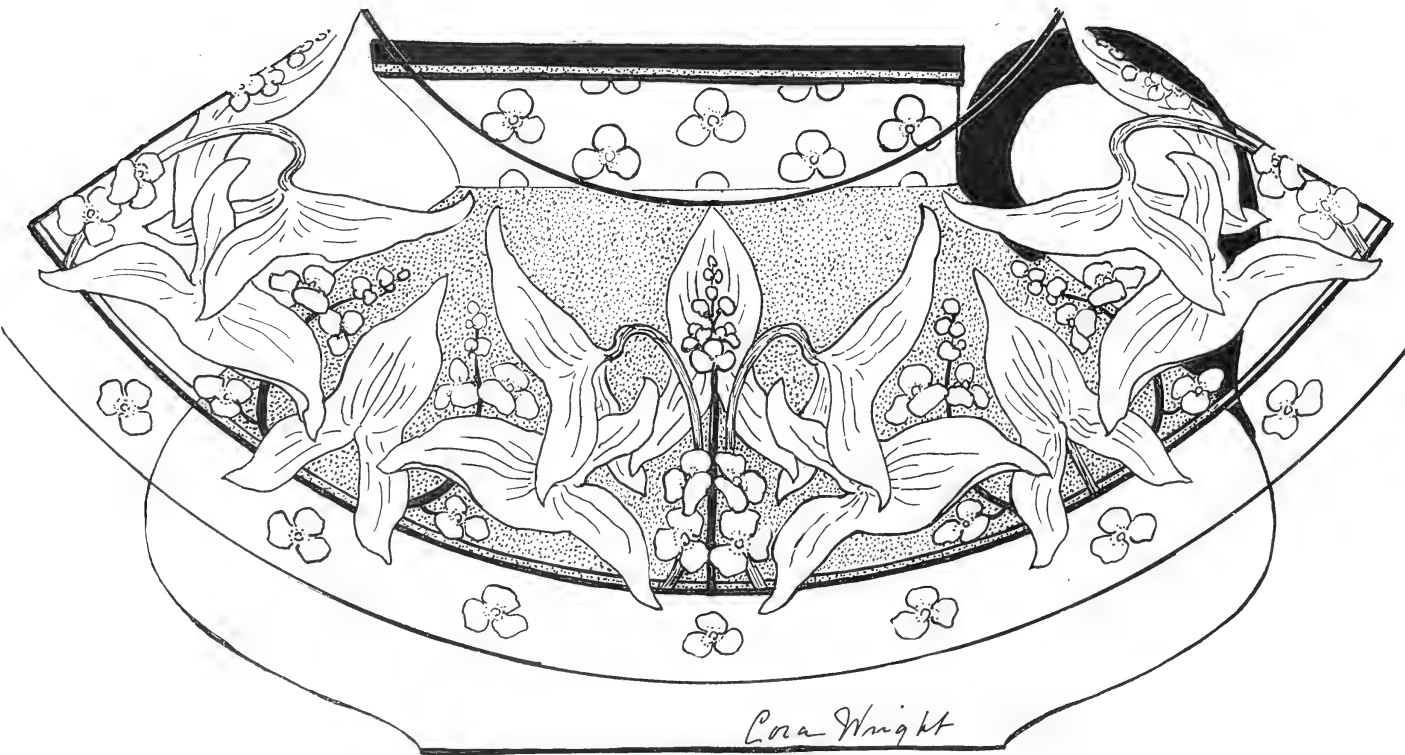
Van Briggie Pottery Co, Colorado Springs.

with parts of other castings to make the new model. These parts are joined together with slip and then the form is rounded out or cut out or otherwise changed until the desired shape is obtained. A good example of this is found in the center vase which was cast in the same mould with the white one at its right; also the white vase at left of center was cast in the same mould as the grey blue one at the right end of the line. We have written at length about this method of

casting, thinking it may be of use to other workers; also we wish to remind potters that many of the most treasured works of ceramic art both of Europe and of the Orient were cast or pressed in the mould, and students are not to be discouraged from using the casting process by the advocates of "all hand work," who have gotten far enough into the crafts movement to become enthusiastic, but not far enough to recognize necessary limitations.



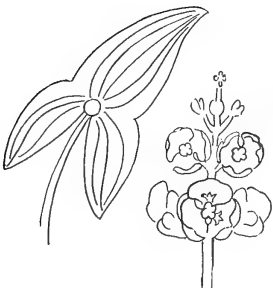
Experimental Pottery and Porcelain, by Mrs. A. A. Robineau.



DESIGN FOR PITCHER (ARROW HEAD)—CORA WRIGHT

DOTTED portion and plain part at base, tinted very delicately with a mixture of Apple and Grey Green medium fluxed, producing a Celadon effect. Flowers, Pale Pink, Flat Enamel with touch of Yellow in centre. Leaves,

Green Enamel floated on very thin, composed of Apple and Brown Green with touch of Black and $\frac{1}{4}$ Aufsetzweis. Wide bands and centre of handle, Gold with pink flowers; narrow bands, portion of handle and outline, black.



SAGITTARIA DESIGN FOR PLATE—CATHERINE SINCLAIR

Third Honorable Mention in Design Competition

To be executed in two shades of green and blue flat enamel.

PRINCIPLES OF DESIGN

(Second Article)

Hugo Froehlich

DESIGNERS refer largely to nature for inspiration, because in all her aspects she is constantly revealing beauty and suggestion. To the untrained mind these are limited or entirely hidden; but to the artist they offer no end of possibilities. To him an apple tree in an orchard is something more than a fruit tree. The drawing of the trunk so characteristic of all apple trees, the movement of the branches and twigs so different from any other; the peculiar growth of the leaves, the contour of the entire tree, the all over pattern that the cast shadow makes on the grass, the subtle difference between the green of the tree and the green of the grass, the green in sunlight contrasted with the green in shadow; all have something to say. All are impressed on the artist's visual sense as some distinct kind of beauty. The apple tree is but one example. Other forms, such as an old barn, a stream, a roadway and flowers appeal as strongly to his sense of the beautiful.

These different kinds of beauty may be in the line, in the technique, in the mass, in the contour, in the color; but true it is, they *exist only for the mind* that has sought for them, that has received such training as will enable it to feel a pleasurable sensation when it comes in contact with them.

This is largely true of historic ornament. The different styles represent the best that has been done by nations of varying periods, climates and characteristics. These are records that reveal to us as much of the life of these people as does the historian's account. Like the paintings of the old masters, the historic styles are legacies that are well worth our analysis and with the knowledge thus derived we create a style of our own. We find that the designer in the past went to nature for his material very much as we do. The exception is the Saracenic and many of the straight line motives.

The symbolic meaning of the motives such as the Egyptian, Assyrian, Early Christian, Indian and Chinese, certainly intensified the beauty and interest in their art. But in all instances, did they seize on certain beautiful truths in nature, and evolve a national style that set forth strongly the characteristics of their life as a people.

The Lotus furnishes both the symbolic and artistic impulse for all variations known as Lotus designs. The scarab, hawk, adder and disc, are prominent as motives and only second in importance to the Lotus.

In the Greek, the acanthus leaf is dominant. In the Gothic the decorative elements and vigor of growth in nature are especially marked. In the Indian ornament, the symbols of the sun, winds, points of compass, trees, flowers, serpents, running water are both instructive and beautiful. The Scandinavian dragon and rope typifying the conflict between vice and righteousness have furnished material to evolve a national style. The Moors only, forbidden by their religion to portray any living thing, have been forced to abstractions in straight and curved line. And yet with these severe limitations they have produced a style rivaling the others in beauty and wealth of variety. After all it is the appreciation of a trained mind that can feel the beauty in a line and well proportioned area

whether based on truth or abstraction. It is the personal quality that can translate these elements into terms of beauty. This, with the topographical conditions of our country, social fabric and characteristics of our people, should give us hope of eventually creating a style distinctly American.

We ought to learn to know the historic styles as well as the paintings of the old masters, that they may be sources of help. We must build on what they have bequeathed to us; but eventually we must be ourselves and not imitators. That is what the Greeks, Romans, Persians and other nations did. Having acquired appreciation of the beautiful they built on the material of the past, allowing their characteristics to influence their expressions. If in this effort, the majority sought inspiration from nature, let us profit by going to her storehouse for material.



Fig. 1.

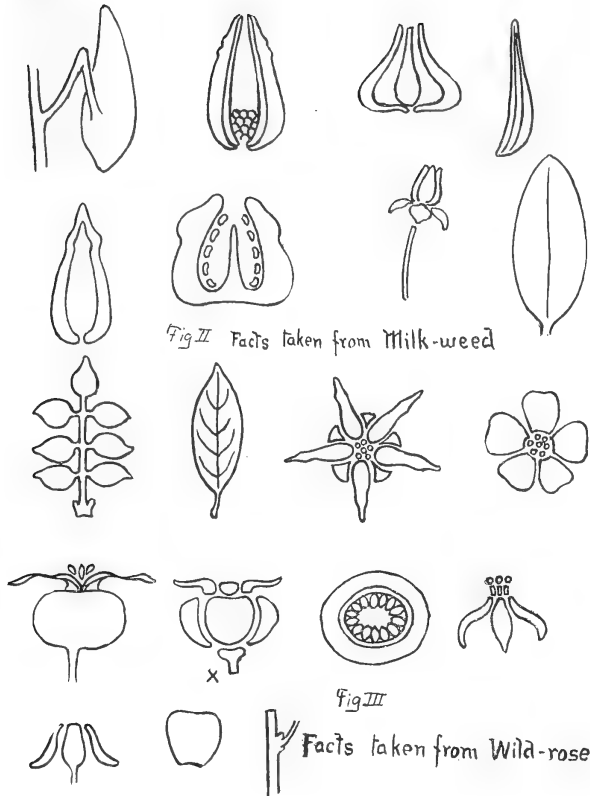
As stated before, decorative elements exist in landscape, plant and animal forms. Training alone enables us to see them. Take milk weed as an example (Fig. 1.) These are the lines that express flower, leaf, stem and pod. In these kinds of lines and shapes we have a theme that can be varied to express an endless number of designs. If we search further and consider the parts of the plant, such as the front, top and side views, single petal, pistil, calyx, vertical and horizontal sections, the leaf, bud, stem, pod, we have quite a series of motives which the fancy may easily transform into units for border, surface pattern and symmetry. (Figs. II and III.)

Problem I. Make a pencil drawing of some wild flower (as these are simple and best adapted to design) and resolve it into its elements. Avoid a literal copying as a close adherence to actual form in drawing the elements, give tight and limited results. The parts of a plant ought to stimulate the imagination and should be interpreted liberally. Do this with a sharp pencil point and try in the drawing of the flower to express in line only and without shading the difference between the delicacy of the petal, the firmer quality of the leaf and the woody strength of the stem. Make several drawings of the wild flowers and motives, as but one attempt will be of no more help to the design student, than one exercise would be to the student of music.*

Problem II. In May number of KERAMIC STUDIO we saw that irregular and unequal areas, finely related in a design, building or picture, produced beauty. In this lesson we will try other principles, one of which is symmetry. Like the former, we find in nature a liberal use of this mode of expression.

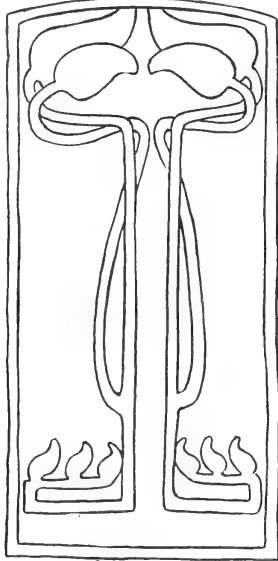
Draw a rectangle 9 inches one way (a vertical or horizontal panel) and compose a symmetric design based on the flower motive that you have drawn in Prob. I. Here again, remember the structural lines of the rectangle, large and small areas, long and short lines. Too many large areas produce monot-

*It is strongly urged to keep a sketch book in which pencil drawings of the wild flowers and facts of the same are made. It will be most valuable material for future work when we have no flowers.



ony, too many small, over decoration and confusion. (See figure IV.)

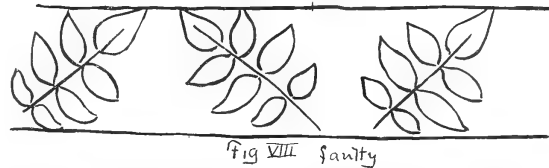
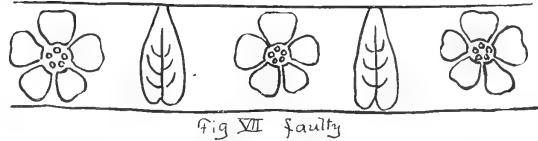
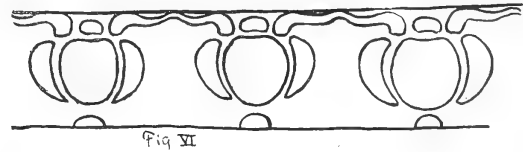
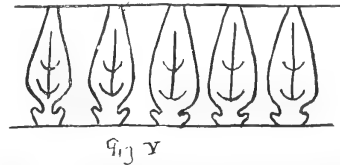
Problem III, Repetition: This principle finds almost universal expression in nature. She repeats blades of grass, trees, flowers and fruit, without number. From the primitive



markings with a stick on a rude vessel by an Indian, to the refined proportions of the Greek fret are embraced the art possibilities in this direction. The same principle is found in

the measured beat of the tom-tom or the measure of sound in Beethoven's symphony. The rude chanting of the savage has a rhythm similar to the metre of Longfellow's Hiawatha. In one, it is a visual measure of some beautiful unit, in another it is a measure of related sounds, in the third it is a measure of related words. The mere repetition of stones, a row of trees or bricks is not beauty, nor is the mere repetition of sounds or words beauty. The units must in themselves be complete and there must exist between them a relation that makes for a unified whole.

Arrange several borders in line making use of one or more of the facts derived in Prob. I. Here again treat the design as mosaic, viz: every part must be interesting in itself and related to its neighbor. (See figure V. and VI.) Espec.



ially is this true of the background areas. Avoid complex units. The simple ones are more easily arranged and give more restraint and dignity in the results. Fig. VII. units are good, but not finely related. Fig. VIII. units unrelated. Movement of leaves not in harmony with the rest of the design. Background areas not fine enough. Fig. IX too crowded. There is related movement of the parts, but it is commonplace, viz: The decorative lines are not apparent, and the background forms are not studied.

Problem IV. All over pattern; the covering of a surface by repeating one or more units is another kind of repetition. Not only do we have to consider the linear movement, but the relation of parts in all directions on a flat surface. Hence the units must repeat vertically as well as horizontally, as in Fig. X.

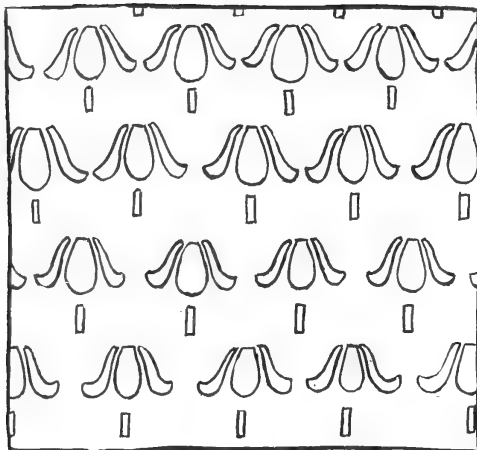


Fig. X

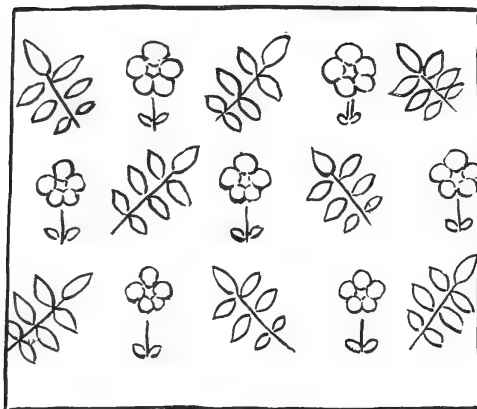


Fig. XI faulty.

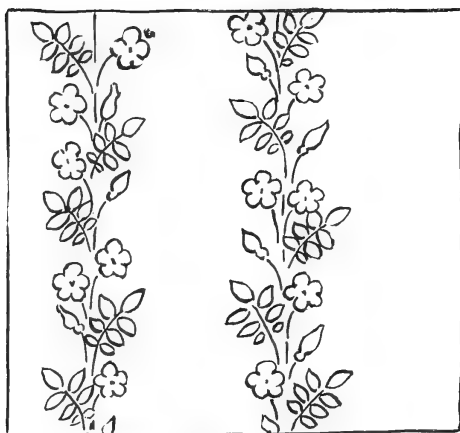


Fig. XII faulty

In a 6 inch square arrange an all over pattern, using a part of a unit or combining several, taking some motive of your own from Prob. I. However, the simpler the theme the easier will be the solution. The separation of a unit into parts like the one marked X in the wild rose motive, is an excellent

treatment, and one used extensively by the textile designers of the middle ages. This method forms the basis of stencil work. It consists of carrying as it were, narrow pathways of background between the parts of a flower, thereby relieving tightness without destroying mass. Especially useful is this in color, as it carries threads of background color through that of the design, thereby softening and harmonizing results.

By the eye, space these units at regular intervals, not too far apart, and on the other hand do not crowd them. The effect must be simple and one to be taken in at a glance. The object of the lesson is to develop the judgment. So much depends on this ability to determine at once just where a line or form must be placed to make a fine arrangement. In the pattern, the background shapes must be studied as in previous exercise, because on their excellence depends largely the unity of the whole. Utility in this design need not be a feature of the lesson, as the object is an exercise of the mind to develop judgment.

Fig. XI. is faulty as the movement of the leaf shapes is not in harmony with the flowers. The units consist of too many small areas and the contour of one is not in harmony with the other.

Fig. XII. is faulty. There is no invention and the handling is commonplace. The design and background are separate elements.

Note. The course followed in these articles, is partly based on a method planned by Prof. Ernest Fennellosa and perfected by Mr. Arthur W. Dow.

THE CLASS ROOM

All subscribers wishing to follow the course of lessons on designs by Mr. Froehlich, may submit their best three solutions of each problem to this department. They will be criticised in the magazine so as to afford the mutual help or class room criticism. The work of one lesson will be criticised in the following number of KERAMIC STUDIO. We can not return work sent for criticism.

Rules for all Students following the Course in Design

After working out solutions and marking them from 1 to 6 in order of merit not of making, select the best three of each problem and make copies, using brush and India ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach KERAMIC STUDIO before 8th of month or no criticism will be given. Keep originals of work sent, to refer to in case it is not put up on the "black-board" of the Class Room.

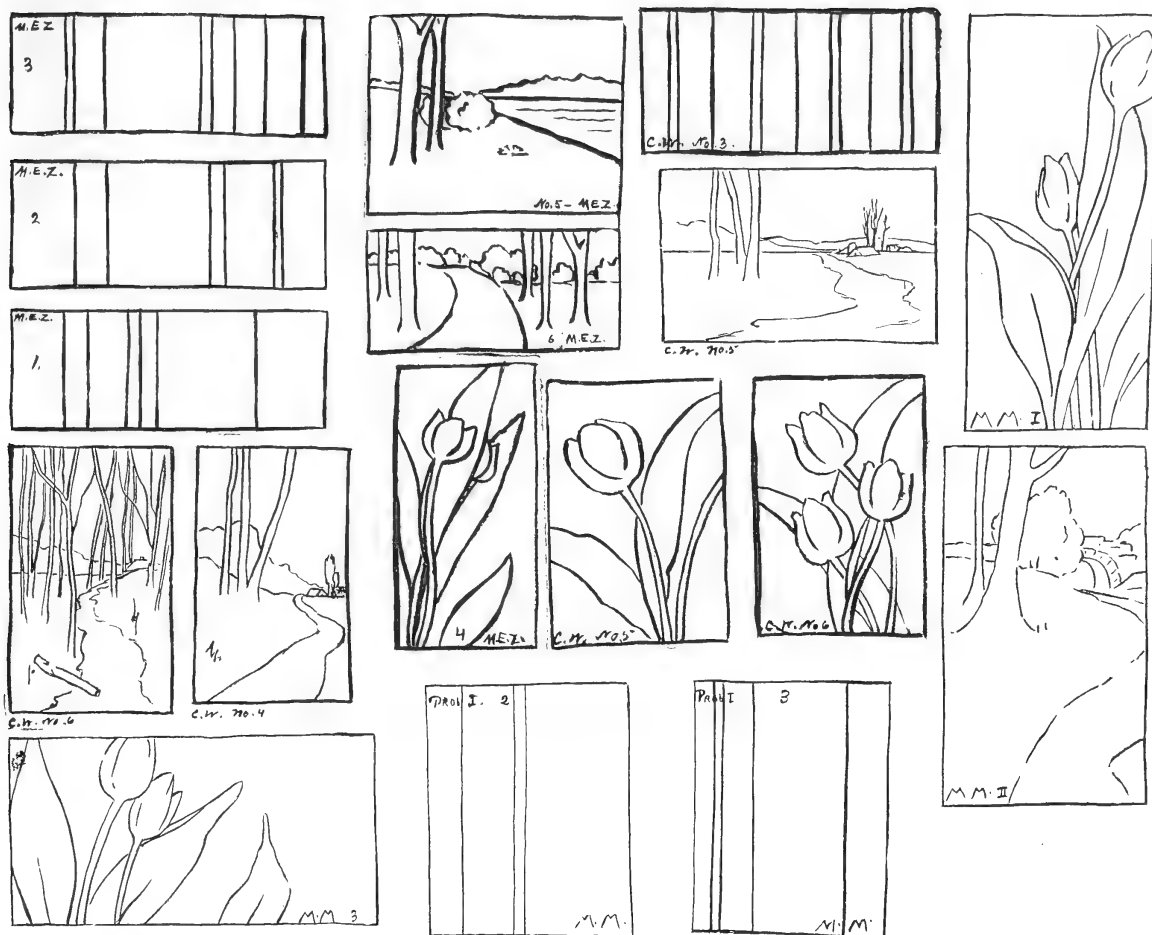
The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

M. E. Z.—Problem I. Solutions 1, 2, 3—Are all composed in rectangles too long for their height which makes a pleasing division difficult. No. 1—The last space is too large in its relation to the space preceding, if the group of two and three and the single line were each moved a little to the right the whole effect would be better, or if the rectangles were cut off closely after the single line it would be improved. No. 2—Is not pleasing as it suggests an artificial arrangement of objects such as trees set at regular intervals, and even in this case the last space would be too large. No. 3—The relation of the first four lines and spaces are good but the remaining divisions are monotonous.

Problem II. Solution 4—The area at right is too large and not well considered, there are too many confused lines in the lower left corner, the line movement is uncertain. The three leaves all seem to touch a vertical line, making the composition tight at that point, as many lines converging to one point attract the eye and produce tightness.

Problem III. Solution 5—Lines in water should be omitted. Space division not bad. Sol. 6—Width of trees and spaces between trees too nearly alike. Sky line not simple enough and too regular; road has not sufficient perspective, line of road not good, edge of road seems to be cut down vertically, must be dangerous traveling; road too prominent—trees ought to be wider at base than at top. Lines have vigor, ought however to be of more uniform thickness.

C. W.—Problem I. Solution 1—Too regularly spaced, the principle of repetition was not under consideration. Sol. 3 is the best—in the other two



the groups of lines should be closer together, making more contrast with larger spaces.

Problem II. Sol. 4—Repetition not under consideration. Sol. 5—Lines of leaves at right too parallel—divisions would be better if larger leaf went to top. Sketch is simply handled, big in feeling and shows promise. Lines are still too unrefined in quality. Sol. 6—Composition too involved, lines go in too many directions; leaf should not go to corner, emphasizing that spot.

Problem III. Sol. 4—This would be better if one of the trees were wider, thereby counteracting the movement of the road out of the picture. Sol. 5—Is the best solution, one of the trees should be wider. Sol. 6—Too many small and similar areas gives confusion.

E. P. H.—Problem I. Solutions are all too regular. Sol. 1 is the best.

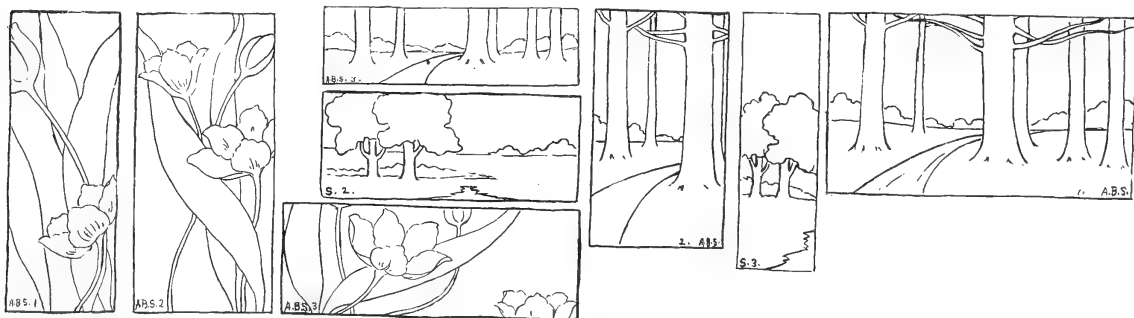
Problem II. Solutions would all be better if the rectangle cut the flower or leaf at side or top as well as base.

Prob. III. Sol. 1—Would be better if the perspective of trees had not been drawn so regularly as to suggest artificial arrangement. Sol. 3—Space divisions too much alike. Draw your rectangle within the edge of the paper instead of cutting paper in a rectangle. Solutions sent in time to be published will receive more definite criticism.

A. L. H.—Your work was sent too late for special criticism. It is all too indefinitely drawn, lines are weak and drawn without sufficient thought—impossible to tell just what was intended. We cannot return work sent for criticisms—see note at beginning. Try again and make a bolder drawing.

L. B. H.—Problem I. All the solutions are open to the same criticisms as that of C. W. No. 3, the problem of repetition is not under consideration. 1 and 3 are the best. Sol. 2 has not sufficiently large areas. The force and frankness of the lines are good.

Prob. II. Solutions are all under the same criticisms as Fig. XVIII in the



lesson. Sol. 1 comes under same criticism as Fig. xx except that it is worse. Sol. 3 is the best of the three but comes under the criticism of M. E. Z. Sol. 4 in regard to leaf forms on either side, but the strong sweep of the stems and flowers across the rectangle is worthy of notice. Sol. 2 has too many small areas in center and all lines are too confused.

Prob. III. Sol. 1 is unfinished—has no skyline or horizon. The clumps of bushes are not well placed, especially the one on the lower line of rectangle, and the road leads out of the picture. The arrangement of trees in regular order, *i. e.*, two small, one large, two small, one large, is too artificial and cuts up the space too regularly. Sol. 2—The lines of trees lead out of picture and nothing else makes a perspective within the frame; skyline is badly considered also two saw logs at right angles so prominently placed, attract the attention and if, as in this case, their movement is not in harmony with the rest of the sketch, they are sure to produce a discord. Sol. 3—As these problems are exercises to study line movement and proportion of areas, we do not feel that L. B. H. has succeeded in either. Lines are weak, crinkly, hastily done, with no thought of considering each area whether sky, distance, water or foreground as a distinct space influencing its neighbors by its contour and size. Work more carefully and with more respect for your medium of expression.

A. B. S. Problem I. All solutions are too uniformly spaced, there should be more contrast of large and small areas.

Prob. II. Sol. 1 is very interesting. The rectangle cuts the flower forms frankly and the background forms are well considered. It would be better if the left edges of the two leaves did not form a diagonal line in center of rectangle, the upper edge of central leaf should cut into right side of rectangle somewhere near the flower instead of in the lower righthand corner, also one line of flower petal runs into the same diagonal formed by leaves. Sol. 2—Good but the stem in lower left corner is distracting and there is some tightness where so many lines converge near the center of rectangle. Sol. 3 is also interesting—would be improved if the two stems and leaf line did not cross each other so closely near lower left corner, also the top of flower showing at base touches the right lower corner, making too small an area there and one too nearly like the one diagonally opposite, it would be better if the flower were a little farther from right side.

Prob. III. Sol. 1—Very good. The horizontal branches might, perhaps, not wind around each other so much. Sol. 2—Also good. Sol. 3—Space division not so good, width of trees too uniform.

S.—Solution 1 and 2—Left side of rectangle should either cut the tree at left or the space between should be wider to make an agreeable spacing; horizon and line of bushes not well considered, the trees have the appearance of standing in water. Sol. 3 is the best—would be improved if the trees were a

little more toward the left. Shapes of trees might be improved. All the solutions however, are interesting and boldly drawn.

M. A. C.—Problem II. Solutions all too carelessly done, too many erasures and meaningless lines. Criticism of M. E. Z. 4 applies to most. Background shapes as to size and distribution not studied.

Prob. III. Solutions are better but still too carelessly done. Think out carefully sky, distance and road areas. There are no numbers on sketches, so cannot criticize specifically.

M. M.—Problem I. Solution 1—This is good but too similar to example in lesson. Sol. 2—Too large a space at right. Sol. 3—Would be better with slightly larger space at left.

Prob. II. Sol. 1—This is good but too many vertical lines down the middle of the sketch. Sol. 2—Same faults as M. E. Z. 4. Sol. 3—Not bad. Leaf at left does not cut the space agreeably. Both Sol. 1 and 3 have merit both in the harmonious lines movement and the fearless way in which the lines of the rectangle have cut across parts of the flowers, the balance of large and small areas is well considered. In Sol. 1 the stems of the main flower meeting the two leaves at a sharp angle make a tightness at that part to be avoided.

Prob. III. Sol. 1 and 3 are too similar to example, 2 also is too near the example but is a very good arrangement of the study; the road ought to be wider near the lower line of rectangle and the base of tree ought not to spread so suddenly, the lines have quality and the sketch picturesqueness.

CLUB

NOTES

The final meeting for the season of the Brooklyn Society of Mineral Painters was held Wednesday, May 6th, at the residence of Mrs. James Masterman, Bay Ridge. After the usual business and discussion of League matters and study course, the club was entertained by one of the most delightful programmes of the year. Mrs. Field read a paper on "The Conventional in Art." Miss Johnson one on "Questions and Problems."

In addition, the club had an unexpected and most welcome guest in the person of Mrs. Wagner, who was in charge of the League's exhibit at the last Paris Exposition. Mrs. Wagner spoke encouragingly of the impression the ceramic work of this country created at the exposition, and gave an extremely interesting account of some of her experiences in connection with the exposition and her stay in Paris. The next meeting of the Brooklyn Society of Mineral Painters will take place October 7th.

TREATMENT FOR ARROWHEAD

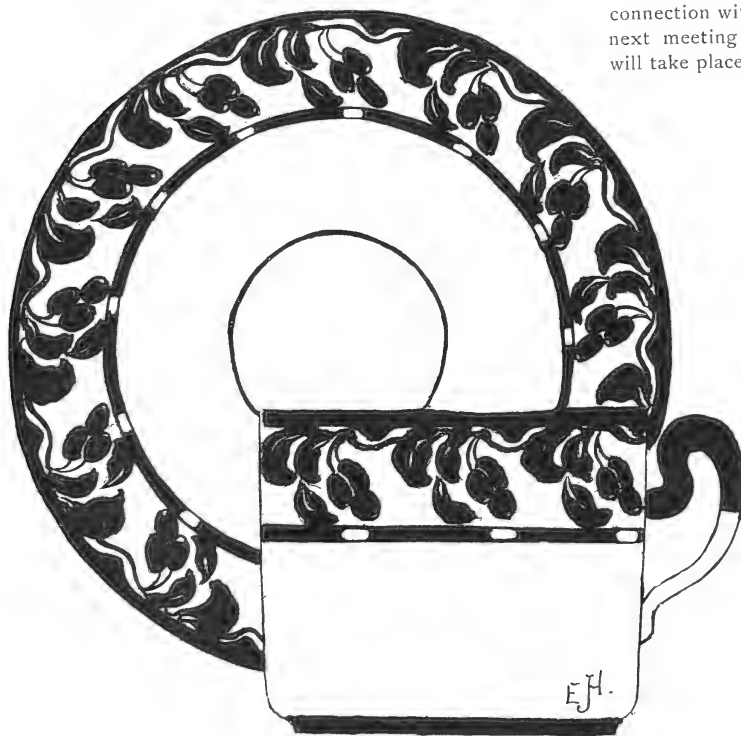
Mary V. Thayer

THE Arrowhead grows by fresh water ponds and is accompanied by rushes and coarse grass. The leaf is a bright green; the flowers are fragile and glistening white, often crumpled and like crêpe borne on yellowish green stalks which are rather heavy and coarse. The blossoms are of two sorts, one bearing a tassel of bright yellow stamens; the other, the pistil, a cushion of delicate green. The background might well carry a touch of the deep blue of the pick-erel weed which always grows near.

CUP AND SAUCER, BARBERRY DESIGN

E. Hall

OUTLINE the design in Black. Tint the border back of the design either a Grey Green or make it of Gold. Paint the leaves and stems a darker shade of Grey Green and the berries a dull Red.





ARROWHEAD—MARY V. THAYER

CLAY IN THE STUDIO

(Eighth Paper.)

Charles F. Binns

HE plain form being constructed, the question of decoration presents itself. Perhaps no ornament is needed and in such case, the surface may be left rough or polished. Most clays will take a fine polish if carefully rubbed, when leather-hard, with a piece of bright steel or ivory. The ancients frequently treated their

vases by polishing part and leaving part dull. Either bands or interlacing lines may be rendered this way. This, of course, is only applicable where the pottery is to remain unglazed and a pleasing color of clay is desirable. For this purpose the ware should be well fired, as a certain amount of density on the surface is desirable. If it be found that the clay will not polish, it may be made to do so by the addition of a little plastic clay, ball clay will serve well. The more plastic a clay is the better it will polish.

Of the decorations applicable to the clay there are, besides polishing, three. Incising, inlaying and slip painting. The first named is the prehistoric method. In the early period of barbaric pottery, before the days of the wheel even, a scratched or incised line was used as ornamentation. It is conjectured that the impress of a wicker form in which the clay was built, afforded the first suggestion, but no such inspiration is needed now. So much has been said and written about line treatment and space relation that it seems unnecessary to enlarge upon these points. Figures 1, 2 and 3 express the simplest forms of incised work, and figure 4 illustrates the application of a border to a simple form. Extreme accuracy need not be sought in this work. An expressive line is better than a mechanical one.

The tool is a blunt point either of steel, bone or hard wood, and the narrow trench must be cut out, not merely impressed, a blunt point is best because the line in section should be shaped like U rather than like V. The condition of the clay is important, and a little practice will determine the correct stage of drying at which to operate.

As soon as the clay is "leather hard," so that it can be freely handled, but is still somewhat moist, the pattern should be decided upon and the vase divided and spaced. The whole of the decoration should now be drawn in India ink and the piece set aside to acquire the proper degree of dryness. This is when the clay will cut freely with the tool and will crumble and fall away as it is cut. If too moist the clay will rise as a burr on each side of the line and will be difficult to remove neatly. If too dry it will be hard to make a line at all.

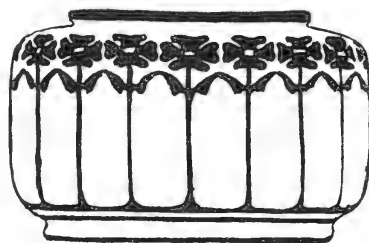
If desired, the effect may be intensified by rubbing a dark color into the incised lines. For this, the vase must be nearly dry and the color damp but powdery. A colored clay in powder will answer well. Some water colors will hold their color in the fire, such as burnt umber, burnt sienna and Indian red, though the last named will darken to a brown.

Inlaying is a step in advance of incising. Apart from the treatment of the pattern, two points must be observed. The clay of the pattern and the clay of the body must be as nearly the same consistency as possible, and they must have absolutely the same contraction in burning. The former of these conditions is not easy to attain. The body clay must not be as dry as that for incising, and there being a broader

surface to be cut away, the clay can be more easily managed in the event of the outline breaking up. The clay used for the inlay must be as stiff as it can be worked freely.

As to the contraction in burning this can be adjusted by the addition of ground flint or ground feldspar to the respective clays. Two or three trial pieces should be made.

In the first take a small jar or a simple disc of clay and tool a broad, shallow channel in it. The edges should be cut as clean as possible, but the bottom of the channel will be better left somewhat rough. The clay for the inlay is now taken, morsel by morsel, on a flat tool of wood or steel, and each piece being dipped in water, is pressed into the groove made for it. A perfect union between the two clays is the first thing to be secured. The surface can be dealt with later. When the pattern is filled the trial should be set aside in a cool, damp place that it may become hard without drying.



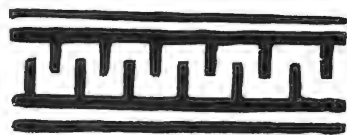
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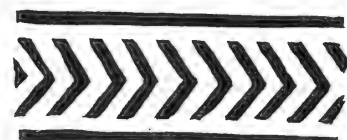
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5



3



2

After some hours, the next morning, perhaps, let the work be carefully examined and if any cracks have developed, they must be stopped with clay. Now with a flexible steel scraper the whole surface can be gone over and a uniform face secured.

Unless a kiln is being frequently fired, it will save time to make two or three of these trials, adding the flint or feldspar without waiting to see how the first turns out. Red clay will usually shrink more than buff or yellow clay and, therefore, the first trial will be to add flint to the red to reduce the shrinkage, and feldspar to the yellow to increase it.

Suppose a yellow pattern on a red body is desired—these natural clays always give more harmonious effects than any artificial colors would do—the pattern inlaid with yellow or red as just described, and burned, a close examination will show that the surface of the yellow is a trifle higher than that

of the red. Also the red clay will be seen to push on the edges of the yellow as though it were trying to crowd it out, as indeed it is. Now to the red dry clay add ten per cent ground flint, and to the yellow clay the same proportion of ground feldspar. If this is not enough, for no two clays require exactly the same amount, increase one or the other until a trial piece shows a perfect join and a true surface.

Figures 5 and 6 are suggestions for inlaid borders, and 7 and 8 are examples of vase treatment by this method. After the work is finished, the surface may be polished with advantage, and this kind of decoration looks best without a glaze.

Painting in slip, also called *pâte-sur-pâte* or clay on clay, permits more freedom than either of the foregoing methods and has its own possibilities and limitations. The vase to be slip-painted must be quite soft, only just hard enough to handle, and the slip must be plump and mellow, about the thickness of good cream. Brushes of two or three sizes will be needed, and a couple of sharp steel modeling tools.

The pattern or design being accurately sketched, the whole is gone over with a thin dash of slip. It is a mistake to attempt to put on much at one time. The work is gradually built up, a wash at a time until the desired thickness is attained. Obviously a smooth surface is impossible, nor is it intended. The work, on the other hand, should present the appearance of a delicately modeled embossment. The scope of this work is almost unlimited. Figures 9 and 10 illustrate the use of a dark slip on conventional lines, but this is only one of many possibilities. Very beautiful work may be done with white slip on a colored ground. The embossment being semi-transparent, the ground color will give a tinted shade with excellent effect. In this work as in the inlaid, both points of agreement must be carefully adjusted. The slip has, naturally, a greater shrinkage than the clay, by virtue of the larger amount of water it contains. By laying in thin washes this water is absorbed by the clay of the vase, but unless the two materials have the same measure of shrinkage, as they dry they will part company.

It sometimes happens that the clay which is the smaller on drying is the larger on firing and this can be adjusted by the use of feldspar. In the clay state, feldspar will act in the same way as flint, as a dry powder which makes the clay porous. In the fire its action is the opposite, it melts and causes the ware to shrink. Some exception may be taken to the constant use of experiment in clay work. Those who have been accustomed to work over glaze with ready prepared colors and firings which last for an hour or less have little conception of the work involved with clay. But just in the same degree they have no idea of the delight and fascination of the potter's art. It may, in fact, be truly said, that a potter is the most enviable of men, for in his many trials he finds unending joy.

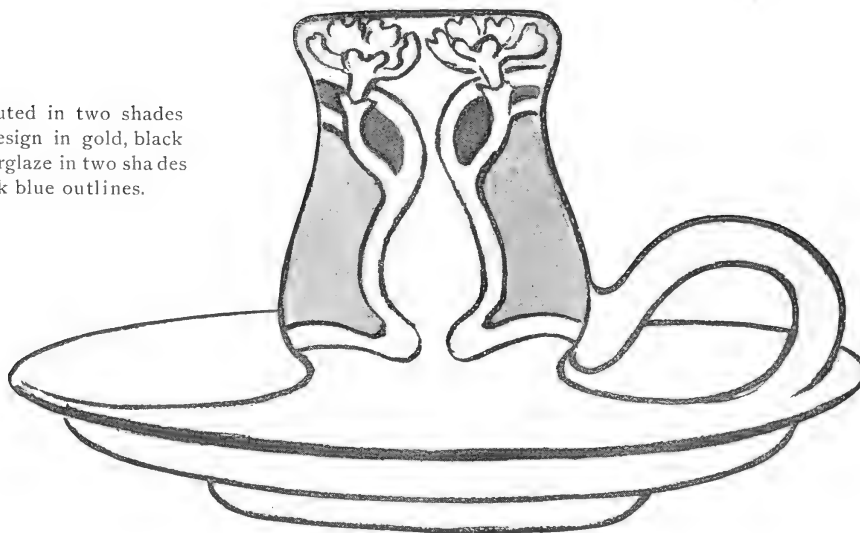
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KANSAS CITY SOCIETY

The Kansas City Society of Ceramic Arts held its monthly meeting in the Athenaeum rooms of the University building May 4th, when the following officers were elected: President, Mrs. Chas. Blackmar; First Vice-President, Miss Dorothea Warren; Second Vice-President, Mrs. Lura W. Fuller; Secretary, Mrs. William G. Whitcomb; Treasurer, Mrs. L. O. Nutter; Executive Committee, Mrs. Charles Coffman, chairman, Miss Josephine Bayha, Mrs. Grace R. Benton, Mrs. D. F. Wallace, Mrs. George McClelland.



To be executed in two shades of brown with design in gold, black outlines or underglaze in two shades of blue with dark blue outlines.



CANDLESTICK—OLIVE SHERMAN

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

METAL WORK

Emily F. Peacock.



METAL work is one of the earliest handicrafts, as shown by the records and examples of work in gold, silver, bronze and copper from prehistoric times. Many of these records and examples are of personal ornament, and implements of war showing great skill in workmanship. The methods used in those early days were those of hammering and casting, both of

which are being used in much the same way to-day. The extreme antiquity of molten and graven images, beaten work and beautiful jewelry is known to us through the writings of Moses, and in European collections of any importance we find ample proof of his words, showing the great skill of the Egyptians in the most elaborate processes of metal work.

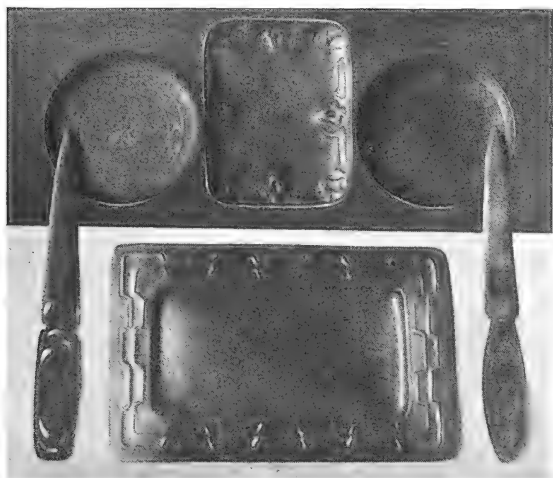
The Assyrians excelled in the making of jewelry and arms. The Greeks also set a standard in metal work which no nation of to-day can reach. With them all work was art and the fine adaptation of the vessel to its use was both a joy and a duty. They did a great deal of casting, but more hammering or embossing with punches. In this manner silver especially was wrought, but gold and bronze also, and even iron in many districts. The fragments left us by this nation are to-day an inspiration to our metal workers.

In the fifteenth and sixteenth centuries Italy was famous for its metal workers, Benvenuto Cellini being the most celebrated. Donatello, Luca della Robbia, Ghirlandaio and Botticelli were all skilled workers. They had the craftsman's sense of the distinctive character belonging to this material. They carried out their designs themselves instead of being content to design and intrust the work to others as many artists do to-day.

M. G. Broemer.

Mrs. H. Froehlich.

M. G. Broemer.



Miss Place.

Emily F. Peacock

Miss Place.

In the few illustrations, I have tried to give some simple problems for the beginner in this work. The student should acquaint himself with the use of a gauge so that he can buy intelligently the different thicknesses of sheet metal for any kind of work. The American and English standard gauges are more generally used, though there are three others. For instance, he would need a strip of copper 10 x 1½ of No. 17 gauge for the paper knife, fig. 1.

The first step is to see that the metal is perfectly flat. If it is not, it can be made so by pounding it on a steel block or on a hard piece of wood with a wooden hammer. A metal hammer would be apt to make marks hard to erase. Heat the metal red hot by applying the flame with the blow-pipe or by holding it over the fire. This is to soften the metal, and the process is known as annealing. While the metal is red hot drop it into an acid bath made by putting three tablespoonfuls of sulphuric acid and two quarts of water into a porcelain dish. This is kept hot by placing it inside a pan of water and keeping that at boiling point. This process is to cleanse the metal from the effects of the flame, or from any foreign substance, and is more effectual if the solution is hot. In a few moments the copper will look pink and clean; take it out with a piece of brass wire bent to make a hook. Never put iron in the bath. Wash under running water and polish with wet pumice powder; dry, and the metal is ready for the design. Draw or trace the design on the metal, then scratch in with a steel point. Cut out the knife with a bracket saw. See that the points of the saw run down when put in the frame. Hold the metal very firmly, keeping the saw oiled and holding it up straight as in fig. 2.

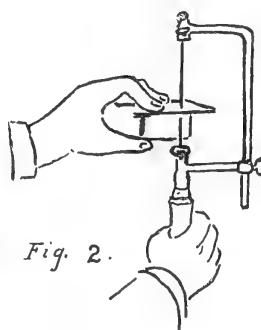


Fig. 2.

Fig. 3.



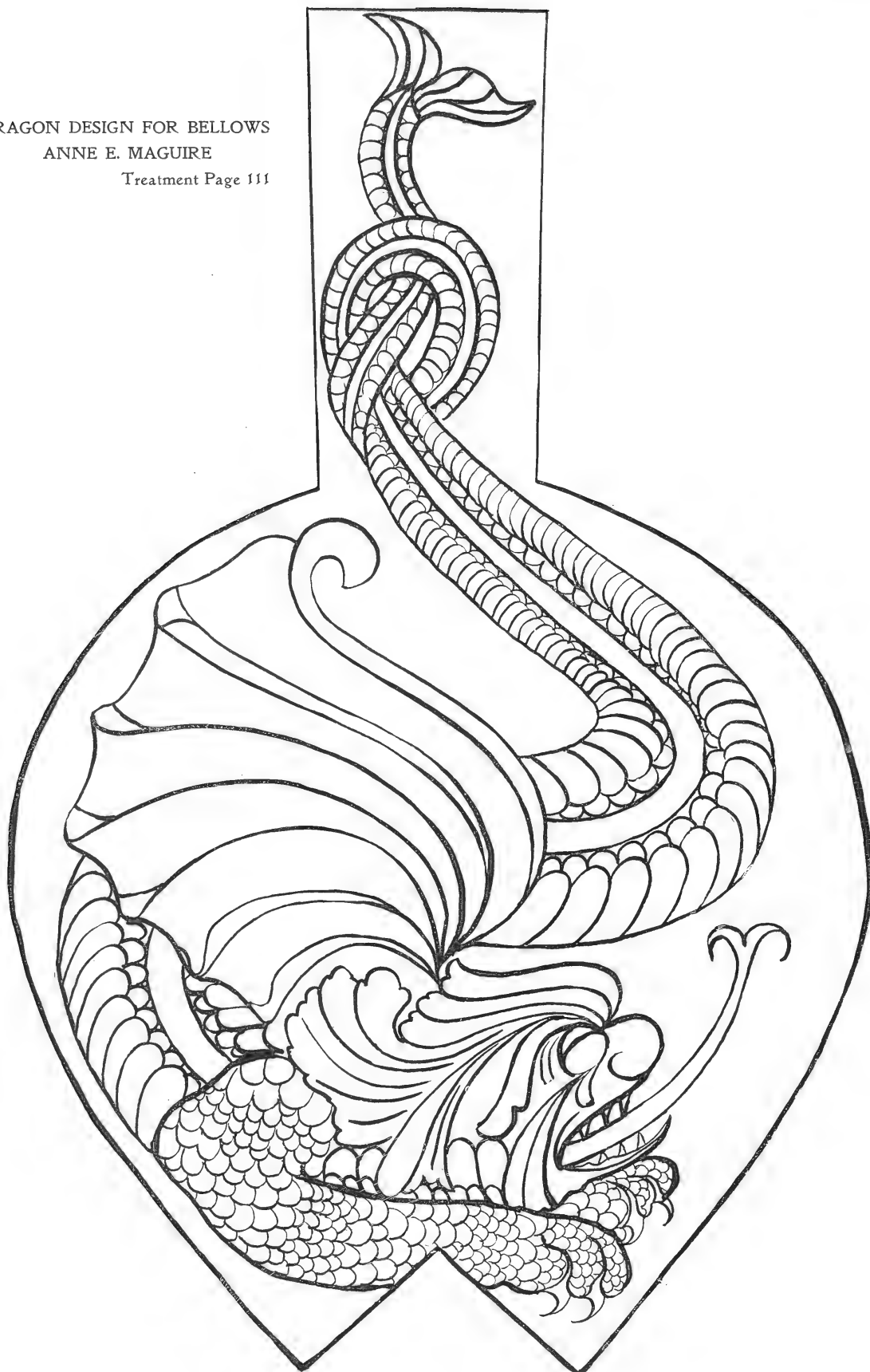
To cut out the design drill a hole through the round end of each space; put saw in drilled hole and work as before. After each space is cut out the edges will need filing to give them a round finish. For this purpose use a small half round file, No. 3 of the Glandon make. To put the line on the lower part of knife place it on cement and chase with rather a large outlining tool.

The cement is made of 5 lbs. of black pitch, 5 lbs. of plaster of Paris and one-half lb. of mutton tallow. Dissolve the pitch first by heating slowly in a large iron pot, add the mutton tallow and later stir in the plaster of Paris; boil very gently for about two hours, taking care that the cement does not burn. In hot weather the cement gets soft, then add

DRAGON DESIGN FOR BELLOWS

ANNE E. MAGUIRE

Treatment Page 111



more plaster; in cold weather it gets hard and needs more tallow. The cement being ready, take an iron hemispherical block six or more inches across, though a block of hard wood or a common brick will answer; put on an inch or more of the cement on the flat side, a little at a time as it runs easily. While the cement is soft put the metal on, press it down, taking care that the cement does not cover the edge. Put the block under running water for a few minutes so as to harden the cement and prevent the metal from lifting. Never work on metal when it is loose. Place the rounded surface of the iron block on a ring of leather filled with sand, allowing it to be easily turned while its own weight keeps it firmly enough in the position for working. If the wood or the brick is used put a sand bag under the corner on which the work is being done. Fig. 3 shows a cut of the tracing hammer, straight tracer for lines and round tracer for corners, and in fig. 4 the student will see just how the tracer is held.



Fig. 4.

Holding the tracer in this way, give gentle and equal blows with the hammer; these should be the force that sends the tool along, the hand simply guiding it as it travels slowly along the line. The beauty of this work depends on how well one blow joins its neighbor.

When one side of the knife is chased, heat with the flame; remove from the cement and wash in kerosene. If the cement hardens, heat the metal again and wash as before, repeat on the other side.

The blade part of the knife is bevelled, first with a No. 2 and then with a No. 3 hand file. Take out the file marks with emery cloth and polish with pumice powder and oil.

(TO BE CONTINUED.)

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PYROGRAPHY

DRAGON DESIGN FOR BELLOWS

Anne E. Maguire

DESIGN for bellows may be treated in two ways; the design may be simply outlined and a deep background burned or it may be outlined and a flat background put in and then colored. The scales, wings and head, in emerald green and blue. The tongue in vermillion with touches here and there in the body of the same color; the eyes are colored yellow.

TECHNICAL ARTICLES ON GRAND FEU CERAMICS

The first technical article by Taxile Doat, which will probably appear in September issue, will be on the preparation and composition of hard porcelain and grès. The six others about modeling, casting, glazing, construction and packing of kilns, formula for colored pastes and glazes, underglaze and overglaze grand feu colors, &c., will follow.

STUDIO

NOTES

Henry J. Baker.

Mr. Hugo Froehlich will occupy the position of Director of Fine Arts, and be the leading spirit in directing the study of composition and design. It is expected that through this leadership there will be expressed a certain unity of ideas that can but bear fruit and add its influence in the development of a certain style that may be eventually known as American.

Mr. Charles Volkmar has opened summer classes at his pottery, Metuchen, N. J., with his son Leon Volkmar as assistant. As Mr. Volkmar is himself a practical and successful potter he is in every way fitted to make a successful teacher.

Mrs. Vance-Phillips has added a separate pottery department to her Chautauqua studio. Prof. Franz A. Bischoff and Mrs. Sara Wood Safford will assist in the overglaze decoration.

Mrs. Lucy F. Perkins, well known for her skill in modeling and who has been a student of both St. Gaudens and French, will give instruction in the building by hand of clay forms. Mrs. Vance-Phillips will give instruction in the application of clear and marble glazes applied to the clays in use at the studio. Mr. Fred E. Walrath, a student at the N. Y. State school of clay working, will be the studio assistant, and operate the potter's wheel.

The Summer School of Pottery at Alfred opens again with its large corps of teachers—Mr. Marshal Fry being again one of the leading spirits. A class in basketry is also to be added under the instruction of Miss Marie Witwer.

Mrs. McGill and Miss Ivory will open a studio at Asbury Park for the summer, where they expect to receive pupils in porcelain decoration and pyrography.

Mrs. Anna B. Leonard expects to receive a limited number of pupils in Boston during June.

Mr. A. B. Cobden's pupils in china painting held their seventeenth annual exhibition at Philadelphia May 14th and 15th.

Miss Mariam L. Candler of Detroit, sailed for Europe on May 23 for art study and recreation.

Miss Jeanne M. Stewart of Chicago, is now in the mountains of Pennsylvania making studies from nature.

A neat little folder has just reached us announcing the opening of Mr. Bischoff's Summer School at Dearborn, Mich., May 15 to July inclusive.

ANSWERS TO CORRESPONDENTS

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

Mrs. G. E. R.—The study of yellow roses is not crisp enough, the texture of the rose petals requires clean crisp treatment. The background color too, is rather muddy and uncertain. It is best to decide what colors to use beforehand and then use them without scrubbing in one color into another. The scrubbing of water colors is all right for some subjects but not for flowers which need to be crisp and transparent. An expert might get a good effect with that method but it is dangerous for a beginner. We refer you to our advertisements of summer school and the list of books on Publisher's page.

Hal.—The little sketches of Arbutus are daintily done but a little tight in drawing. The clusters are seen too much in detail, when you look at a cluster of flowers you do not see every flower in the group, it is only after gazing

KEEP THE FIRE ALIVE

KERAMIC STUDIO

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MISS EDITH A. ROSS ♪ ♪ ♪ ♪ ♪
MISS ALICE B. SHARRARD ♪ ♪ ♪
MRS. ELIZABETH SAUGSTAD ♪ ♪

JULY MCMIII Price 35c. Yearly Subscription \$3.50

A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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Some Leading Agencies of Ceramic Studio.

We take pleasure in mentioning a few of the leading agencies for the sale of the

KERAMIC STUDIO, where, also, subscriptions may be placed:

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 Buffalo—Mrs. Filkins, 609 Main Street.
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KERAMIC STUDIO

Vol. V, No. 3

SYRACUSE NEW YORK

July 1903

"Make hay while the sun shines."



OME things can not be insisted upon too much; every year and many times in the year *KERAMIC STUDIO* reiterates the advice to make a summer portfolio for winter use. Go to work systematically as soon as the earth begins to put on its gala dress of flowers and greenery. Begin with the first flower that comes, put at the top of the page—Snowdrop, Hepatica or whatever it may be. Make first, if you wish, a panel of flowers massed, marking only the general characteristics of shape, color and mass of light and shade. On the next page make a careful outline drawing of the entire growth of one plant from the root up. Then draw in detail and with exactness the separate parts, noting everything possible, every peculiarity—the corolla, calyx, pistil, stamen, leaf, stem, bud, seed and root, top and side and back view of each and cross section when possible. Then take each part and make it into an ornament to be used for design, conventionalizing and simplifying, and making each ornament symmetrical, that is, having both sides alike; then try two or more parts combined to make an ornament. Sometimes the flower, stem and leaf, or some other combination can be used without making any symmetrical ornament of it, drawing in outline and flat tones and repeating at attractive intervals.

Try a few ornamental borders from these motifs in black and white and various color schemes or make a design for some ceramic form. Do not force your ideas but draw only what suggests itself to you as a good arrangement, then leave a blank page for suggestions that may come to you later and start a new page with the next flower that blossoms.

Do not confine your efforts to the ordinary and well known flowers—everything that comes your way is fish for your net and often the most unusual forms are found in weeds and other wild things heretofore unnoticed.

CLAY IN THE STUDIO

(Ninth Paper.)

Charles F. Binns

WE will not close the instructions in clay work without allusion to casting as a method of production. There is no intention here of arguing in defence or condemnation of casting. It is a fact which may be defended by those who use it and our space at the present time is too valuable for academic discussions. As in everything a beginning must be made in the right place and right way and the early steps made clear. A mould is a necessity and instructions for working in plaster have already been given. These will not be repeated here but so much knowledge will be assumed.

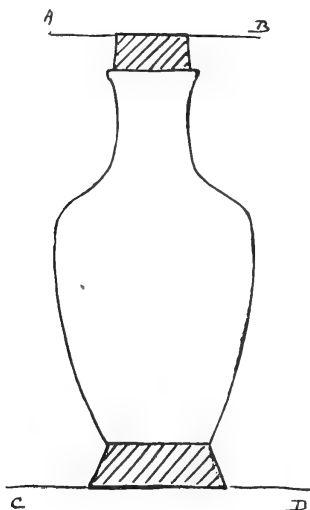
The design for a vase or other piece is prepared on paper and a turner must be employed to shape a model, exact in outline, on his lathe, either in hardwood or plaster. This model should have a small, spare piece added to its height about half an inch in length and about a quarter of an inch smaller than the diameter of the top to which it is attached. For the bottom a disc must be turned like a truncated cone. Height one half

inch, smaller diameter same as the bottom of the vase, larger diameter one inch greater. This is for use in making the bottom mould. A reference to the sketch will explain the point. The two shaded portions are the additions, for convenience of moulding only, be it understood, the bottom one must be loose or only attached by the slightest of means, the top spare is better if it be turned out of the same piece as the vase and is of course permanent. A cradle of soft clay is now prepared upon a level surface, preferably a sheet of glass, and the vase laid down and pressed into the clay until the axis is perfectly horizontal. A simple way of performing this is to find the center of both top and bottom and with a sharp pair of dividers measure these two centers so that both shall be exactly the same height above the glass. The dividers are now passed entirely around the vase, one point resting upon the glass and the other against the vase. By this means a long scratch is made on the model which divides it into two equal parts. This must be carefully done for it is clear that if one part be the least bit larger than the other the resulting mould will overlap so that the model cannot be extricated.

The model must be buried so that one half is only seen. This may be done with soft clay or two thin plates of plaster may be cut to fit, one on each side. The latter makes the best job but is a little more troublesome. In either case the two ends of the bed must be cut to the lines A B and C D. Upright on these lines two plaster plates are set and the whole is bound around several times with thick cartridge paper and held with twine. There is now a deep trough at the bottom of which lies the half buried vase. Plaster is now mixed and poured so as to cover the vase about one inch. This will set hard in a few minutes and the whole thing may be taken up. The paper is removed and the cast turned over. It is well now to remove the vase carefully from its cradle, take away the clay bed and turn up the face of the half mould. In the edge of this two or three small hollows must be made to secure the interlocking of the other half—these are called "natches," probably a corruption of notches—and the vase is carefully replaced. The half mould and the vase are now thoroughly sized with the soap solution and reinclosed in the paper. A second mix of plaster is poured and the second half of the mould formed. For the bottom the mould is tightly bound with twine and turned upside down. The loose bottom piece is removed, natches cut, paper bound round and plaster poured, all as before, not forgetting the sizing. We have now a mould in three pieces, two halves and a bottom. The model is taken out and set aside, it is of no further use.

This mould can now be dried and used for casting but it would soon wear out and the whole process would have to be repeated. The usual plan therefore is to make a "case" or reverse of each part of the mould so that new moulds may be run as often as needed, with the minimum of trouble. The process of casting is long and somewhat intricate to describe. A visit to a good mould maker or a course of instruction is the shortest way to learn. The mould already described can be used, of course, casing is only an expedient for repetition. While the mould is drying the slip should be prepared. The mixture already given will serve, in fact it is best to use the same clay for all purposes if possible. The mixture for casting, however, should not be so plastic as one for throwing or building; the

plasticity which is an advantage for the latter is the reverse for the former. A very plastic slip will be slow, long in setting and wet to handle. A certain amount of plasticity is necessary but not too much. The mixture in question is a compromise, it is plastic enough to work and free enough to cast. Slip is the better for age. A white clay on being stored in slip shape will assume a bluish color and often acquire a strong smell. This is no detriment, in fact a potter prefers his material in this condition. If an old whiskey barrel can be procured and filled with slip it will be an advantage. A good store is a great help. A stout stick for stirring should be provided, a pitcher or two, a flour sifter with the wheel taken out and a long handled dipper. After making and becoming somewhat aged the superfluous water should be dipped or drawn off and the thickened mass thoroughly stirred. One of the pitchers is now filled, the slip being dipped up and poured through the flour sifter to arrest lumps. It will probably be found somewhat frothy and the air bubbles should be worked out. This is done by pouring slowly from one pitcher to another, pouring carefully down the side so as to break the bubbles and avoid causing more.



If the bubbles prove obstinate, as they sometimes will, a little of the slip should be poured into a bowl and thinned with water, then, with a badger softener or other large soft brush the whole interior of the mould is mopped with slip. The mould is now put together and tied with twine and the slip is poured carefully in at the top. It is filled to the brim and at once the slip is seen to settle down. This is caused by the absorption of water by the plaster. The mould is filled up again and again and then the edge may be examined to see what thickness of clay has accumulated. The thickness of a piece of pottery should be always proportioned to its size. When the proper thickness is reached the mould is carefully lifted, be quite sure that the bottom is held firmly, and the contents poured back into the pitcher or barrel. It should be turned mouth downward for a while to drain and then the lip of the vase, all round the spare edge, should be gently pushed away from the mould. This serves two purposes, it assists the vase in its separation from the mould and it informs the operator of the kind of release he is to expect. Moulds and clays behave differently, some cling obstinately to each other, some part company with readiness. The first cast from a new mould is nearly always bad. The inner face of the mould always has some of the size upon it and this prevents a uniform absorption. It is therefore

a common practice to make a rough filling, pouring slip in and out and opening the mould at once to remove the soft clay. This saves time but is a small test of courage for it appears to involve the loss of the first piece. When the mould, with the contained vase, has stood say ten minutes, bottom upwards, the bottom mould may be gently detached and laid aside. After a few minutes more the halves may be gently separated and the vase taken out. Extreme care is necessary at this stage. Cast clay is very tender, many times more tender than plastic clay, and must be handled very gently. The vase must be set on a dry bat and put aside to become hard. It requires some resolution to refrain from attempting to finish a soft piece but the endeavor must end in disaster. The work, positively, must not be touched until it is perfectly dry. The exceptions to this rule are when the clays are to be changed in shape or painted with slip, or perforated. These are done while the piece is moist. When quite dry the spare piece may be cut off, the seams rubbed down and the whole finished.

A few words here on the faults developed in casting. Pinholes are caused by air bubbles and have already been mentioned. If the cast cracks in the mould it may be because the body is not plastic enough or that the flint and feldspar are too coarse. In the former case add a little ball clay, in the latter endeavor to procure a finer brand of material or use a finer sieve through which to strain the slip. If the clay holds fast to the mould and will not be separated without damage the mould is probably too hard. This is governed by the amount of dry plaster added to the water when making the mould or, possibly, to the plaster being poured before it was ready. For casting moulds a pound of plaster to a pint of water is enough, for moulds used in pressing plastic clay this may be increased to one pound, six ounces to the pint. In pouring casting moulds the operation should be delayed as long as possible. Allow the plaster to thicken until it can only just be poured smoothly and the moulds will be "kind" and mellow.

In burning cast ware it should be remembered that pottery made this way shrinks considerably more and will stand a higher heat than pottery made by hand.



STUDIO NOTES

Miss E. E. Page, of Boston, Mass., went to Europe on June 19th for art study and travel.

Mr. Charles Volkmar is building three kilns at his Metuchen N. J. pottery, for different kinds of work. Besides his well known art pottery he expects to turn out artistic work in plastic tiles and enameled terra cotta. His son Leon Volkmar will work with him.

Miss Emily Peacock will teach enameling on metal during the summer at the Guild of Arts and Crafts, East 23d Street, New York.



TREATMENT FOR SWEET PEAS

F. B. Aulich

FIRST painting: Paint in the background with Albert Yellow, Yellow Green, Yellow Brown and Olive Green in the dark parts, wipe out the lights with a No. 5 pointed brush, shade the light flowers with Grey for White Roses, the others with Aulich Rose and American Beauty color, the leaves with Yellow Green.

For the second and last painting use the same colors over again, pad the entire surface so that all colors blend, and then finish them with a thin pointed brush which we call a stemmer, used for stems and the fine lines.



SWEET PEAS—F. B. AULICH

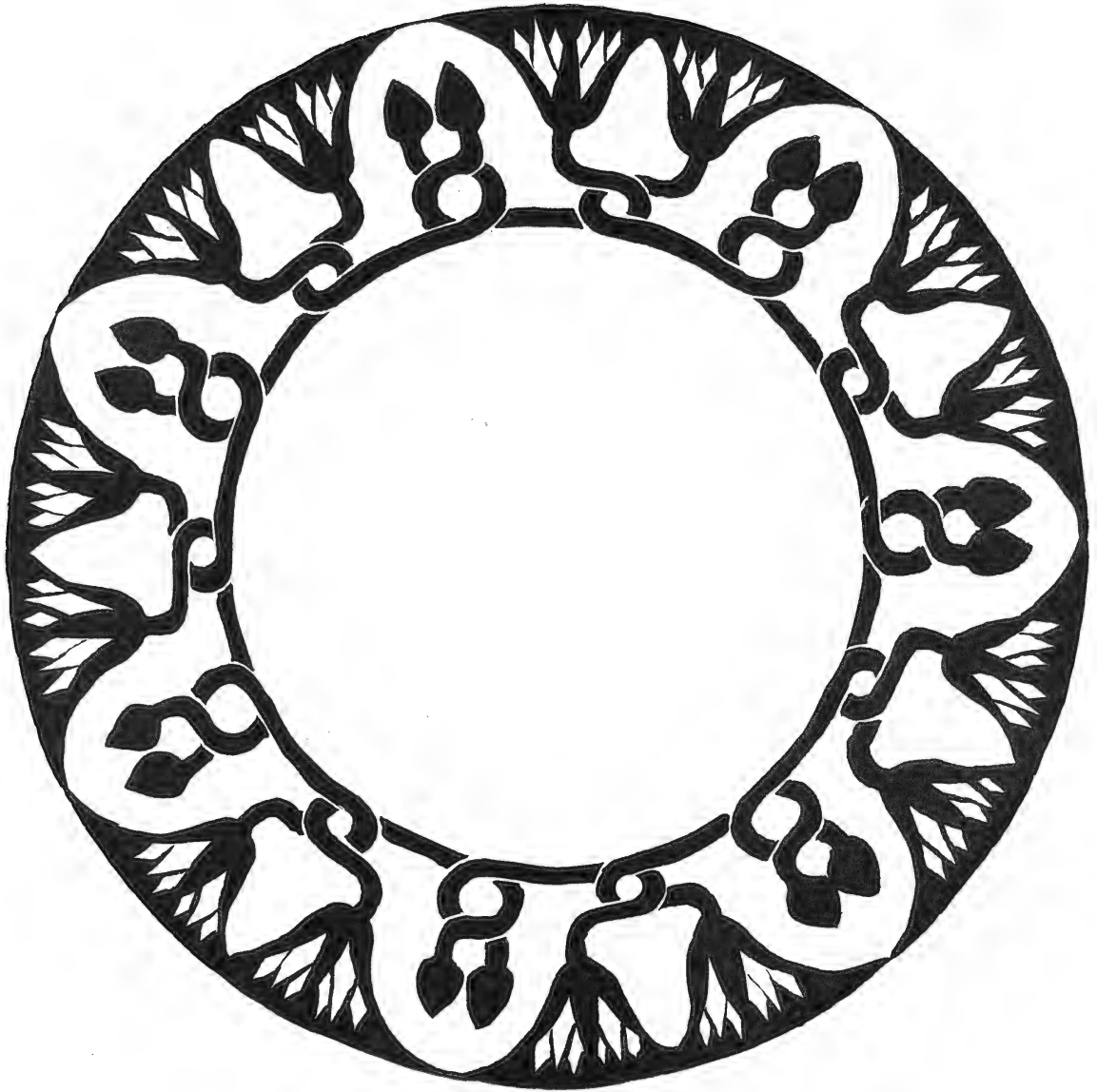


PLATE DESIGN—GEO. F. HOEL

To be carried out in a blue grey.



Dancers, by Leonard. Hard porcelain biscuit. These figures, about one foot high, are to be used for decoration of a table, either scattered or grouped.

GRAND FEU CERAMICS

II—SEVRES AT THE PARIS EXPOSITION OF 1900—(Concluded)

Taxile Doat

MR. Sandier also secured in Parisian studios decorative designs and statuettes which were to give the artists and artisans of the factory an opportunity to display their skill. Among the most remarkable pieces I will mention the two biscuit groups for the table decoration of the Presidential Palace, by Frémiet, the master sculptor: the Scandinavian Diana and the Athenian Minerva, which from a technical standpoint are truly marvels of fabrication; also the group of dancers by Leonard, 14 charming figurines, well conceived for the decoration of a table, whether scattered or grouped; and the Danish Dogs, by Gardet, which before firing had the fine grey tone of the two marble pieces of Chantilly, but do not give such a pleasant impression since firing.

Among smaller pieces, better suited to biscuit, a material

which finds its proper place between the large marble statuary and the small ivory carvings, one admired a wolf following human steps on the snow, by Mr. Valton; the charming Phryne of Theodore Riviere, the Parrots of Gardet and twenty other pieces in porcelain, biscuit or grès. All were on tables covered with laces or silk cloth marked with the seal of the factory.



The Scandinavian Diana, by Frémiet. Large piece in hard porcelain biscuit, 4 ft. 8 in. One of the two biscuits made for the Elysée (Presidential House), the first pieces of that size ever made at Sèvres in biscuit.



The Cities of Provence. Large vase, pâte sur pâte, by Taxile Doat. Size 4 ft. 8 in.

Between two rows of cases were the large vases, almost exclusively the work of the artists of the factory. The firers had produced three vases 4 feet 7 inches high, in flammé reds of copper, as rare and beautiful as gems.

Among pâtes sur pâtes specimens were about ten pieces of mine, one of them a large vase, decorated with the "Cities of Provence" in the shape of medallions scattered among leaves



Table service—Shapes by Mr. Sandier. Decoration by Mr. Lasserre, with grand feu colors over the glaze. Cream white background, decoration salmon pink.



Juno's Jewels.

The Apples of the Hesperides.

Small pieces in hard porcelain. Pâtes sur Pâtes by Taxile Doat.



Small pieces in hard porcelain with crystalline glazes of a most charming effect.



Small porcelain pieces, decorated over and under the glaze. Top vases, Mr. Lasserre, Mr. Aldrich. Central vase, Mr. Trager. Two lower vases, Mr. Géloux.

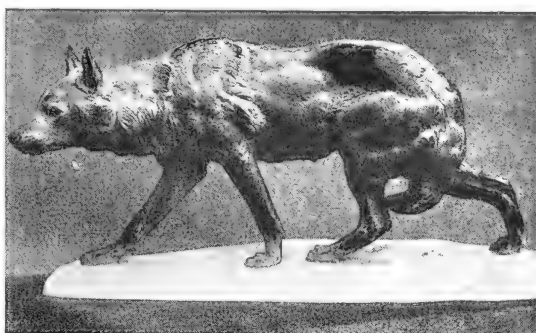


Porcelain plates decorated with grand feu colors over the glaze. This is the same process as the old overglaze painting, but firing is done at grand feu temperatures. These pieces have then stood two grand feu firings: the first to obtain a ware without flaws, the second for the decoration. They are typical of the complete reform of porcelain decoration at Sèvres.

of the orange tree, the favorite tree of the Mediterranean coast.

Grand feu colors under the glaze adorned a vase of Mr. Fournier (virgin vine), grand feu colors over the glaze the vase (Peacock feathers) of Mr. Géb-leux and Mr. Bienville in The Swans used the process of juxtaposed colored glazes.

Fifteen cases contained vases of all shapes, classical or fancy, in pâte tendre, hard paste, new porcelain and grès cérame, inkstands, powder boxes, cups, candlesticks, plates, table ser-



The Wolf, by Valton. Small piece in grès biscuit. Taxile Doat collection.

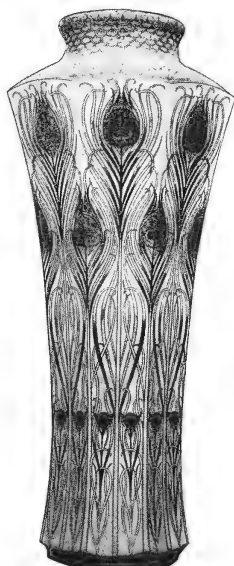
vices and a thousand articles of ornament, proclaiming the beauty and whiteness of the finest of clays, the kaolinic clay.

The most beautiful pieces of all, in which the decorative motives taken from nature were best adapted to the shapes, showed the masterful art of Mr. Lasserre, the cleverness of Mr. Gillet, the fine designing of Mr. Uhlich, the imagination of Mr. Brecy and the talent of Mess. Trager.

Of course such results had not been obtained without a



Virgin vine by Mr. Fournier. Large vase, 4 ft. 8 in. Grand feu colors underglaze.



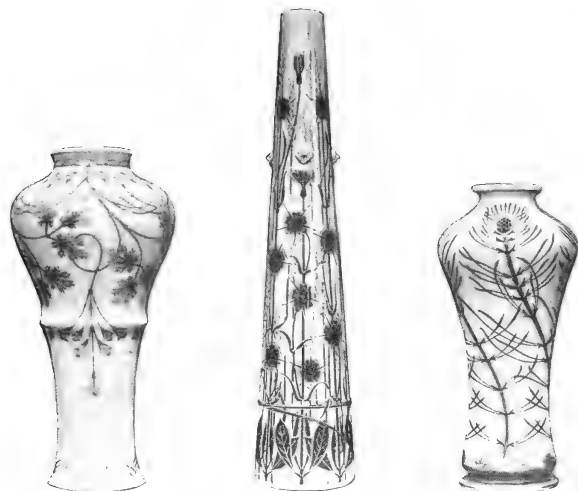
Large vase, 4 ft. 7 in., by Mr. Géb-leux. Grand feu colors overglaze.



Hard porcelain, Mr. Gillet. Incised decoration and enamels.



The Swans. Large vase 4 ft. 8 in., by Mr. Bienville, juxtaposed colored glazes.



Small porcelain pieces—Grand feu decoration under the glaze. Typical of the new conventional decoration with motives taken from nature.

gigantic effort, and these pieces had not come out of the kilns as hot cakes would come out of a baker's oven. The number of broken, defective or unsuccessful pieces, although not unusual, had been important. A selection was necessary and was made under the direction of the Minister. Everything which reminded of the shapes or the technique and decorations of the past was intentionally discarded. No piece was admitted which had any ceramic flaw or showed any artistic inferiority. Bronze mountings were cast out as illogical in ceramics, the famous "Sèvres blue" was rejected, also the vases with marble effects and even the paintings over porcelain.



Orchids. Geraniums.
Hard porcelain medium size vases. Grand feu colors overglaze.
Decoration by Mr. Lasserre.

Notwithstanding this strict discrimination, it was more than 1500 pieces that the Sèvres factory offered to the great French and cosmopolitan crowd which during six months passed before this beautiful display. The sale of these objects was authorized by special Ministerial decree, and its success exceeded all expectations. It amounted to more than 300,000 francs and orders were booked which meant three years of work without an increase in the personnel. Notwithstanding the high prices asked, as many as forty orders were taken for some pieces. The International Jury awarded by acclamation a great Diplome d'honneur for the factory, 3 grands prix, 10 gold medals and many others for the collaborators.

To-day all these marvels are dispersed. Among the most important, the fragment of the Ceramic Palace has been erected in a Parisian garden; the frieze remains on the Great Palace; the fountain, broken and mutilated during the night by vandals and unscrupulous collectors, had to be restored and was then transferred to the garden of the Galliera Museum; the monumental mantelpiece was acquired by the Museum of Decorative Arts in Paris. A good part of the objects in cases were purchased by foreign Museums and the exquisite little pieces bought at high prices by collectors will long remain hidden in private collections, while public collections will exhibit theirs for the renown of Sèvres and the propagation of French taste.

(TO BE CONTINUED)



THE League Exhibition after being in New York for a week started upon its journey, but we have not yet heard from the clubs to which it has been sent.

As the report of the decision of the judges had to be sent in very hastily for the last number, it was very brief, and a request has been made that it be given more fully. The medals in the competition on educational lines were awarded as follows:

Gold medal and scholarship, Mr. Rockwood Moulton, Brooklyn.

Silver medal, Miss I. A. Johnson, Brooklyn.

Bronze medal, Miss Peacock, Brooklyn.

In the comparative exhibition the highest possible number of points was 30. The following received over 25:

BOWLS.

No.	Design.	Adaptation to form.	Drawing.	Color.
19.	Mr. Fry	29	29	29
20.	Mr. Fry	28	28	21
27.	Mrs. Safford	27	28	24
21.	Mr. Fry	26	27	27
29.	Miss E. Mason	25	28	18
18.	Mrs. Fry	21	23	27

VASES

No.	Design.	Adaptation.	Color.
4.	Mr. Fry	29	28
16.	Mrs. Pratt	27	28
14.	Mrs. Price	22	26
6.	Miss Foster	21	28
10.	Mrs. Harrison	23	26
3.	Mrs. DeWitt	17	27

PLATES

No.		Design.	Adaptation.	Color.
No. 41.	Mr. Fry	30	30	27
" 40.	Mr. Fry	28	29	27
" 103.	Mr. Fry	25	24	25
" 52.	Mrs. Price	25	25	20
" 34.	Mrs. Cooper	24	26	23
" 33.	Mrs. Cooper	23	23	25
" 39.	Miss Davis	24	25	17

Miss Perry, who was re-elected chairman of the Educational Committee, has prepared a plan for the coming year, with a view to the St. Louis Exposition. It includes:

- 1st. Drawing of a cup and saucer.
- 2nd. Design for an 8-inch tile.
- 3rd. Jar, either covered or uncovered, in clay.

A circular is being prepared to send to all the clubs, giving more definite instructions. This is called the educational part

of the work, and the comparative part includes the decoration of:

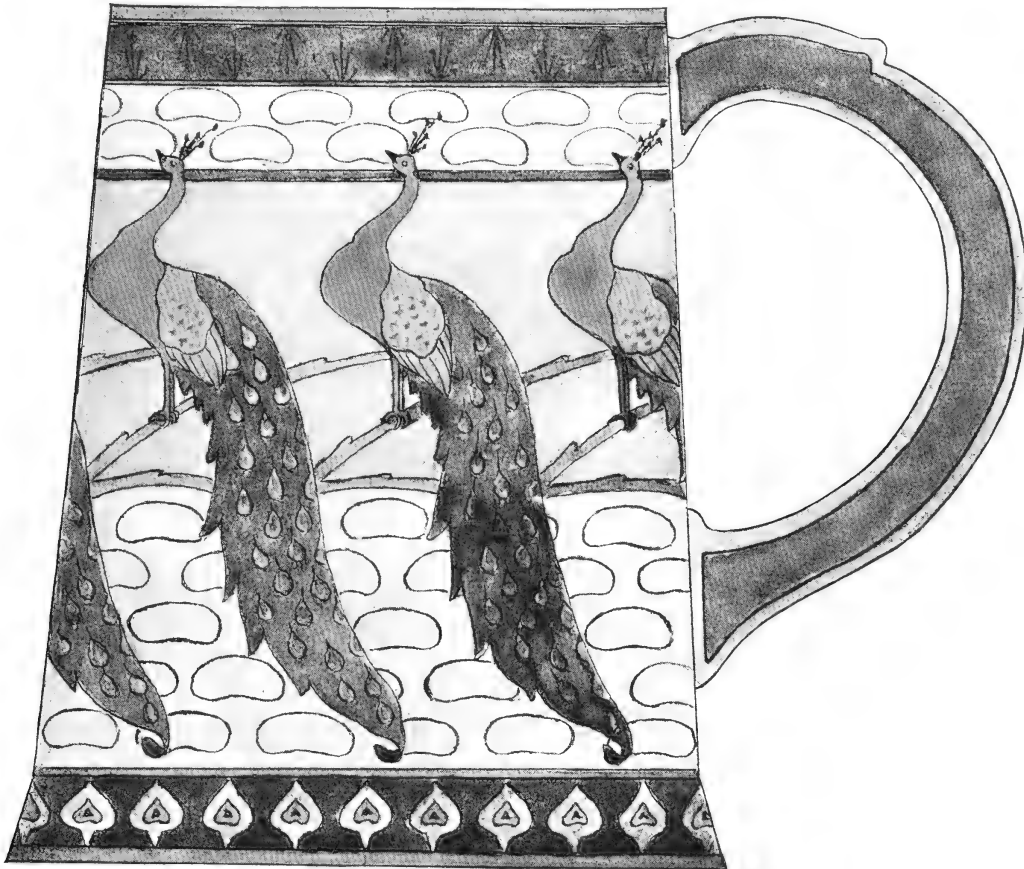
1. Vase No. —
1. Pitcher—the best design in this year's competition.
3. 9½ or 10-inch plate.

After waiting for months, at last something definite has been heard concerning St. Louis, and it was expected that a full report might be given in this number, but it is not quite ready.

The time of year has come when the members of the Advisory Board are scattered, and the club meetings are dropped, but some of us are trying to keep the machinery in working order, and we shall be glad to have suggestions and criticisms so that we may move along with better understanding, and better results in the coming year.

IDA A. JOHNSON,

President.



PEACOCK STEIN

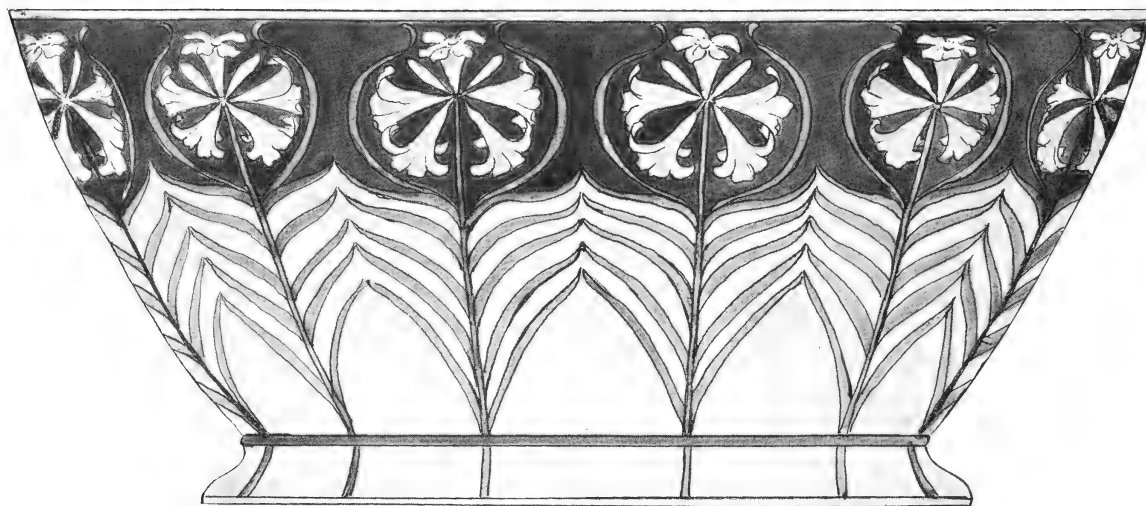
Alice B. Sharrard

THE design can be carried out in lustres or simple colors.

The birds, Gold, Green and Blue lustres, outlining in gold and black. For colors use Light Violet of Gold, Apple and Deep Blue Green. Background, Yellow Brown, branches, Ivory Yellow. Tint lower part of the stein a pretty cream,

with figures outlined in gold, also the wide border just above the birds. Narrow bands can be of a darker shade of peacock green, made by mixing Apple and Deep Blue Green, with a touch of Dark Green. Figures of Light Green, with gold centers. Very narrow borders of cream or violet. Handle of cream and green.

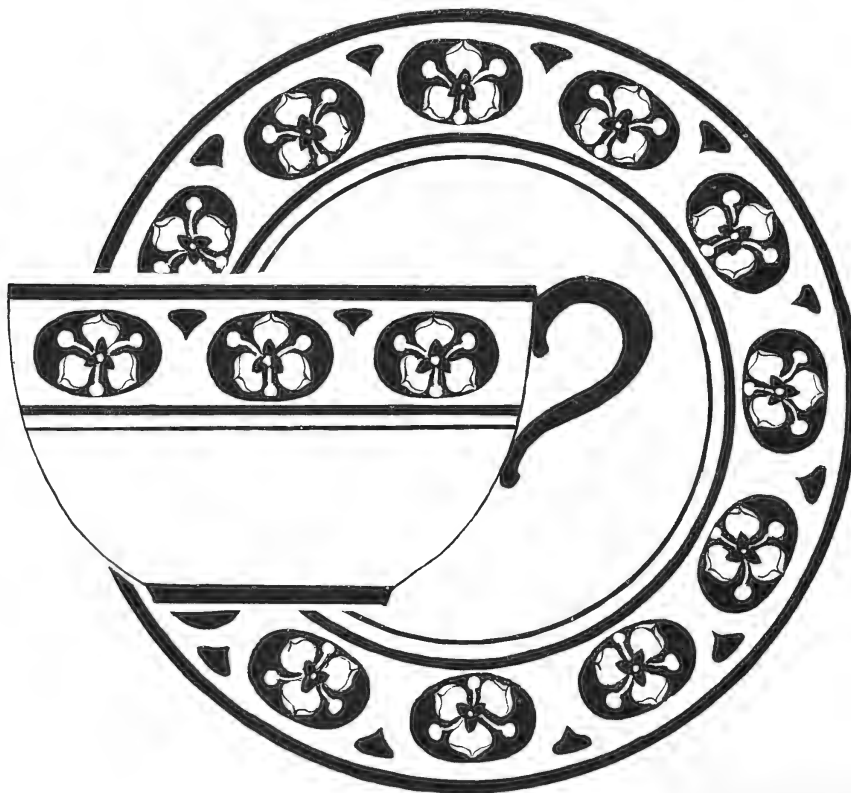
Outline in black or gold.



SALAD BOWL—MISS NEWELL

FOR the first fire cover the background with gold, put green lustre on stems and leaves, rim and bands at base. For second fire cover upper part of gold ground with dark green lustre, outline with black—inside of bowl rim should have a

band of gold edged with black. The design can be carried out also in three shades of green on a white ground, flowers white or use ivory yellow, yellow brown and brown lustre with gold outlines.



CUP AND SAUCER—ELIZABETH J. HALL

To be executed in dark red and gold with figures outlined in black, or in dark green with a touch of yellow in center of figures.

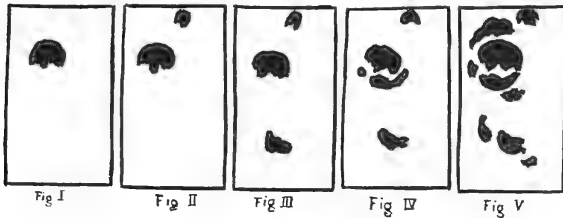
PRINCIPLES OF DESIGN

(Third Article.)

Hugo Froehlich



If a blot of ink is placed somewhere in a rectangle, (Fig. I) the attention is immediately drawn to that blot. Although it be shapeless and unrelated to the rectangle, it has the power of attracting the eye. If another blot is added (Fig. II), immediately a relation is set up between the two, the eye going from the larger to the smaller and returning to the larger, thereby producing movement as understood in a picture. A third spot (Fig. III) increases the movement. The spots seem to bear some relation to each other, but as yet there is none between the blots and the background shapes. However, with the addition of more blots (Fig. IV) this becomes apparent until in Fig. V a balance is felt, viz: the quantities of blots and background shapes are in such proportions as to produce a pleasurable sensation on the eye. This relation between the blots and the background depends largely on their position and contour, and as contour is another term for line, it is governed by the laws of line. The blots thus



far have been devoid of meaning, and yet the mere distribution of them in such a way as to produce movement, main group, secondary groups, produces a kind of beauty. If, however, these spots are charged with meaning or if instead of being merely blots, they assume the shape of a flower (Fig. VI), the mass of a tree (Fig. VII), their power to please increases immeasurably.

On the ability to spot a given space well depends the richness of the work. So often a design or painting looks thin and washed out, which in most cases is due to the inequality of the light and dark shapes.

Consider the "Landscape with Boat," by Corot (Fig. VII).



Fig. VI

The horizontal line, middle distance, farther shore line and action of the boat produce horizontal movements that are beau-

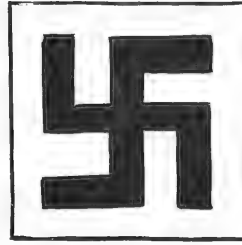


Fig. IX

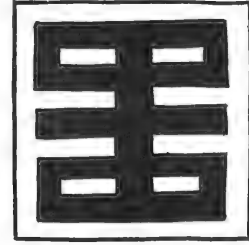


Fig. X

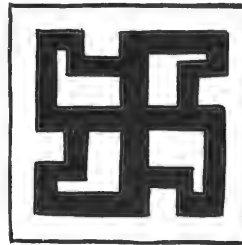


Fig. XI

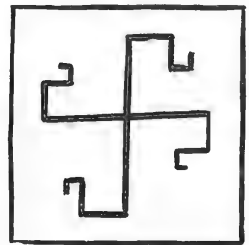


Fig. XII - family



Fig. XIII



Fig. XIV



Fig. XV



Fig. XVI

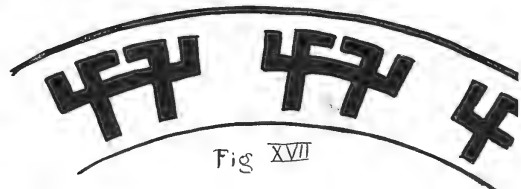


Fig. XVII



FIG. VII—LANDSCAPE—BY COROT.

tiful variations of the horizontal edges of the canvas. They sweep from one side of the canvas to the opposite; now clearly defined, now hidden, but always felt. The vertical movement of the trees echoes the vertical sides. The contour of the trees and diagonal movement of the stream act as a variation on the horizontal and vertical, but growing out of and in perfect harmony with them. This is the language of line which exists in nature but is revealed only to the trained mind. Again, the dark and light distribution of these areas makes an agreeable spotting of the canvas. The large dark mass of foliage on the left, the answering group of trees to the right with the dark of the foreground and distance makes a series of dark spots inter-related. The same is true of the light shapes. The sky space as the large area supported by two secondary spaces of the water and sky showing through openings between the trees. This arrangement is further augmented by flecks of light throughout the dark masses. Although this distribution of

light and dark spaces produces a distinct kind of beauty, the technique that is to transform the shapes into trees, sky, water, a boat, is of vital importance. The laws of composition can with diligent application be mastered in a comparatively short time, but to acquire this individual way of interpreting nature and power to express the same is a life problem. Hence artists never cease to be students.

In the Ca Doro on the Grand Canal, Venice (Fig. VIII) we have a similar problem as far as composition is concerned, to the landscape by Corot. In this facade however the element of truth does not enter unless we consider construction as such. Roughly speaking the facade forms a rectangle whose surface is broken up by vertical, horizontal and curved lines producing areas of excellent proportion and harmony. Within the limitations of construction, these lines and areas produce an eye music equal to that of the Corot landscape. See the difference; one adds the element of truth, the other does not, and yet both are monuments of art.

On analyzing the Ca Doro or Palace of Gold, we find two horizontal lines marking the stories. The distances between these are of unequal widths to give variety. One vertical line is placed a little to the right of the middle thereby making further variations. The areas to the right of this line are broad, flat and restful, while those to the left have many openings. Thus the principle of "unequal areas, well related," is employed. In the balconies and cornice the principle of linear repetition is used. In the section to the right of the vertical line that of symmetry is engaged. So much for line. The spotting is no less beautiful. Well considered flat surfaces stand for the light while balcony opening, doors and windows represent the dark. The point I wish to make is that composition or laws of arrangement must be the foundation of all art expression whether they have the element of truth or not.

Like line the principle of dark and light is of universal expression; a dark book on a light table, a dark barn against a



FIG. VIII—CA DORO ON THE GRAND CANAL, VENICE.

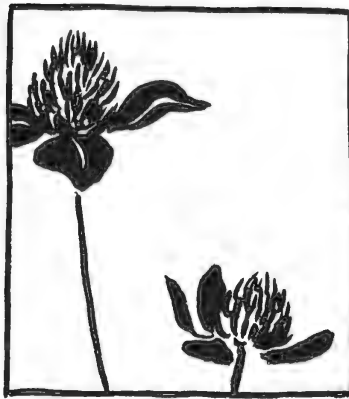
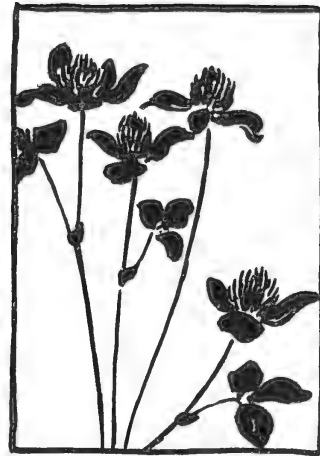


Fig XIX faulty

Fig XX
faulty

light sky; everything in a room and out-of-doors is lighter or darker than the objects around it. The technical name for this difference is that of values. The value of an object is the comparative light or dark note that object makes in relation to its surroundings. In a design it is the comparative light or dark which one area or space has in relation to the space around it. In wood carving the undercuts form the dark, while the raised parts are the light areas. In architecture, the windows, doors, chimneys and cornice are so many items like the pigments on an artist's palette, that the architect can, within the limits of construction, dispose of in such a way as to produce a work of art. He must have the same knowledge of composition that is required of the artist. Both create beauty. The difference lies in their palettes and limitations of material. The designer, like the other two, uses for his palette some style, historic, naturalistic or purely inventive and with these and his knowledge of composition sets about to create beauty. He too, has limitations to observe.

We have partly considered line and found it possible to express many kinds of beauty. In dark and light there is opportunity for quite another kind, one which without actually using color gives many of the qualities of color. An arrangement of greys can be made to strongly suggest Corot's pearly colors of dawn, Rembrandt's "Night Watch," Velasquez's "Portrait of a Man." The photographs of paintings produce effects in dark and light that are the foundation of color.

If we reduce dark and light to its simplest terms, it will be that of two tones, viz: black on a white ground (Fig. vi), the black standing for one and the white for the other tone.

Problem I. As in our first lesson take some straight line motive; the Swastika, the Indian symbol for the four winds (Fig. ix). Compose it in four squares, three inches a side, make each square a variation based on the Swastika. Be sure to study the width and length of both the white and black areas. Figs. ix, x, xi are correct. Fig. xii is faulty. It is good as an invention, but quantity of dark is not enough to balance quantity of light.

Problem II. Use same motive as in Prob. I but employ the principle of repetition. Make four solutions, width of border two inches. Make variations based on the Swastika like Fig. xvi. One of the problems may be a curved border and a design for a plate or saucer thought of as in Fig. xvii. Avoid the thin washed out quality of Fig. xii. Much will depend on the unit, its width and the space between the units.

Fig. xiii is faulty as the unit is too small for the white area. Fig. xiv is faulty as units are too large and crowded.

Problem III. Use some flower motive having large flowers and compose in four rectangles, seven inches one way, the other side to be determined by student. This is similar to Prob. II of the May number of KERAMIC STUDIO. Now fill in the background or the flower areas with black. Be sure to make flowers large as a small flower is much more difficult than a large one. Have parts of flowers and leaves frankly overlap, as this gives strength as in Fig. xviii. If the parts do not touch as in Fig. xx, a weakness and thinness is at once felt. A number of white flecks are left in the black areas of Fig. xviii to relieve heaviness; these light spots acting as echoes to the larger light spaces. The background shapes will present the greatest difficulty. On their simple and beautiful contour will depend the unity of the problem. I place emphasis on this as it is difficult to get and is nearly always overlooked.

Fig. xix is faulty as there are two points of interest and the eye travels from one to the other. There is a lack of main mass to hold the interest. The background shapes have not been considered.

Fig. xx is faulty as it has a spotty effect. No grouping of main mass. All parts barely touch. Background areas not thought of as definite shapes. It lacks vigor and force, and there is wanting richness in color. For material use German white, water color or Japanese paper. For ink, the India stick ink rubbed on an ink slab until very black is one way. Another is to use Charcoal Grey tube water color. Be sure to get the tone black. Brushes, small red Sable or Japanese.

The object of the lesson is first, to train the mind to enjoy the dark and light arrangement in nature and in art; second, to develop the power to create beauty within the limitations of the terms.

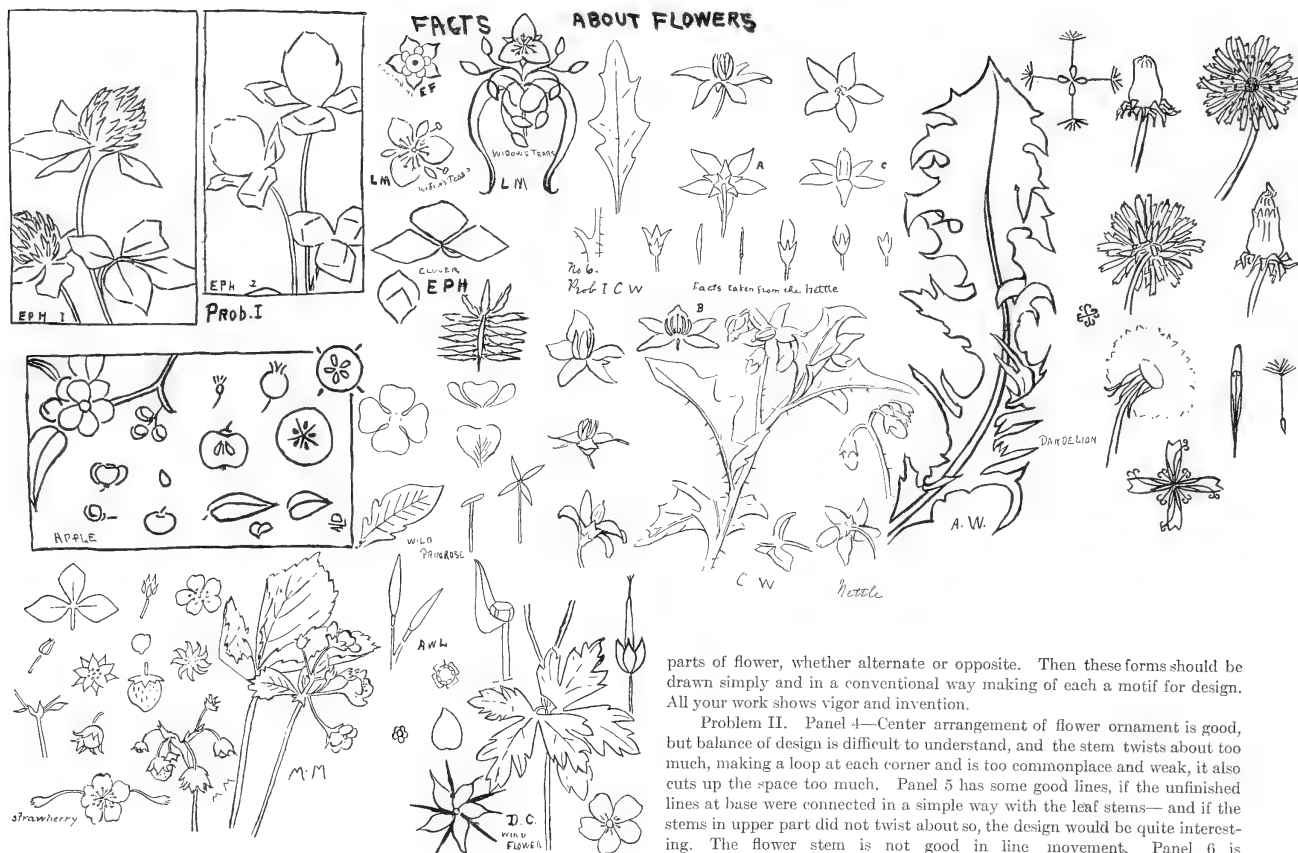
THE CLASS ROOM

All subscribers wishing to follow the course of lessons on designs by Mr. Froehlich, may submit their best three solutions of each problem to this department. They will be criticised in the magazine so as to afford the mutual help of class room criticism. The work of one lesson will be criticised in the following number of KERAMIC STUDIO. We can not return work sent for criticism.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

Rules for all Students following the class in Design

After working out solutions and marking them from 1 to 6 in order of



merit, not of making, select the best three of each problem and make copies, using brush and INDIA INK, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach KERAMIC STUDIO before 8th of month or no criticism will be given. Keep originals of work sent, to refer to in case it is not put on the “black-board” of the Class Room.

C. W.—There seems to have been a general misunderstanding as to the first problem. The flower was to be composed in a rectangle so as to cut the space agreeably. A simple drawing of a flower does not fulfil the conditions of the problem. Then in regard to the “facts taken from flowers” there has been little or no attempt to conventionalize the parts drawn so as to make an ornament, and the parts themselves have not been carefully drawn in detail so as to give material for design—different positions of flowers and leaf are useful but cannot be called *detail*—detail is for instance, the stamen, pistil, calyx, corolla, stem, bud, flower, etc., given in top, side, and perhaps back view, cross section when possible, showing inside of pistil and stem, and arrangement of

parts of flower, whether alternate or opposite. Then these forms should be drawn simply and in a conventional way making of each a motif for design. All your work shows vigor and invention.

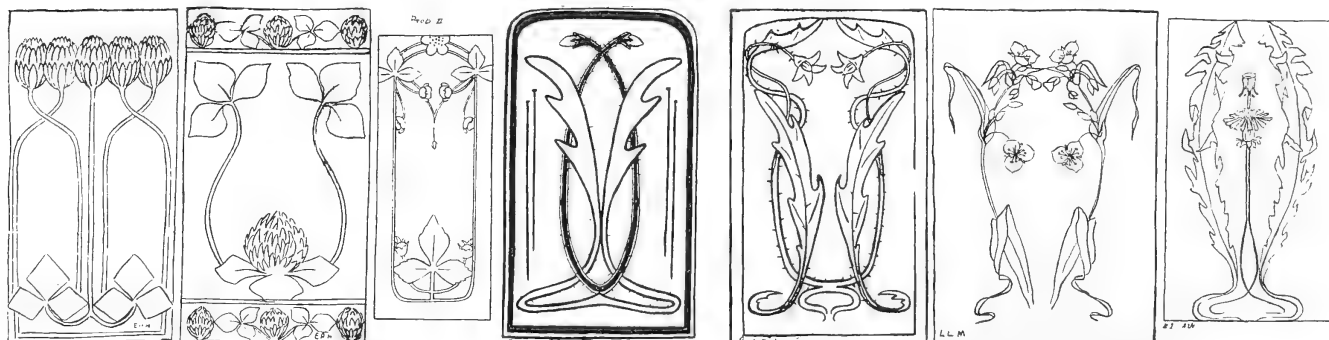
Problem II. Panel 4—Center arrangement of flower ornament is good, but balance of design is difficult to understand, and the stem twists about too much, making a loop at each corner and is too commonplace and weak, it also cuts up the space too much. Panel 5 has some good lines, if the unfinished lines at base were connected in a simple way with the leaf stems—and if the stems in upper part did not twist about so, the design would be quite interesting. The flower stem is not good in line movement. Panel 6 is simple and interesting, it would be improved if the dark loop in center did not just touch the other stem line—its line movement could be better thought out. There is one criticism we would make which is not quite in the lesson—and that is, avoid if possible, anything in a design (unless purposely illustrative) which suggests anything but the beauty of subject and its treatment. For instance, the two lines at the side help the general good effect but the knobs at top make them resemble pins.

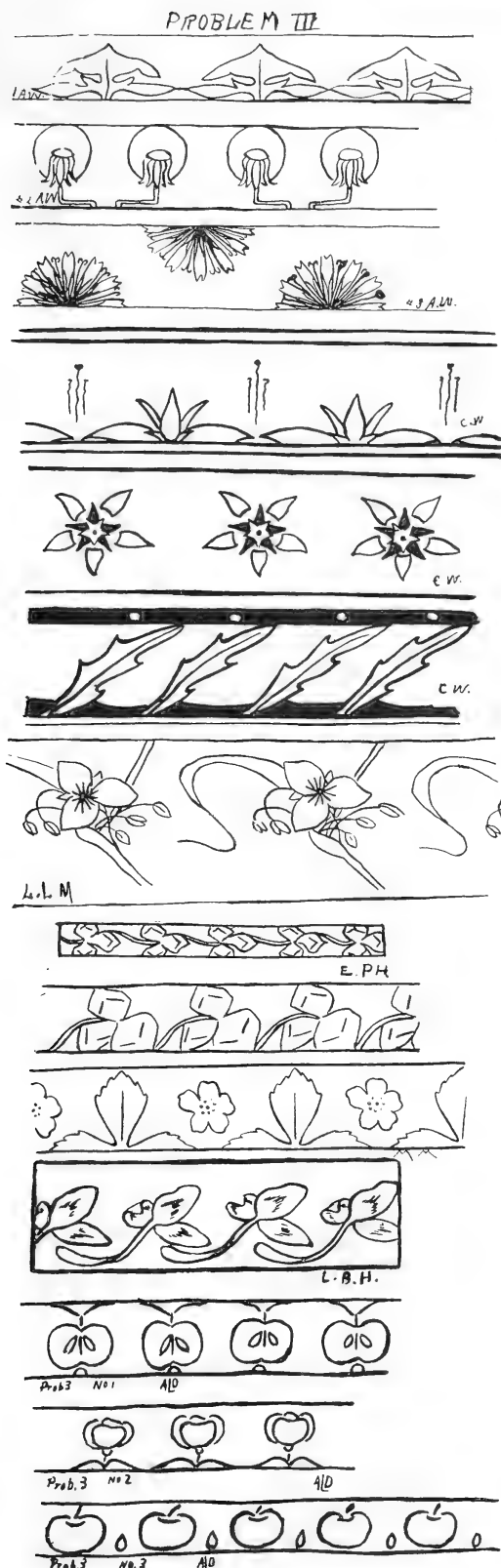
Problem III. Solutions are all good, well spaced, simple, decorative and inventive. The drawing of the flower explains what we mean by a “fact taken from the flower.”

Problem IV. Sol. 4 and 6 are both good in every way. Sol. 5 is perhaps a little heavy and crowded, but is interesting. It should be a little more carefully drawn and spaced so that one could know whether the curved line belongs to top of flower ornament and whether the three pointed form represents a calyx below.

A. W.—The general character of flower is well seen but the forms might be more simple, and thought out in a more decorative or conventional way.

Problem II. Solution 1.—Invention good but too many lines running to lower center of design, the curve on the stem of flower is also not well con-





sidered. It seems to be turning its back toward sides of rectangle whereas, if properly drawn, it would fit the square and seem to be part of it. Center leaf ornament not good. There are too many small areas there. Try to make a good line of even thickness throughout, broken in spots if necessary but not thick and thin alternately. Sol. 2 is rather better. The design should either cut the rectangle frankly or be entirely within the space, not touching it anywhere. The stems are stringy and the opening out of the flower stems where the leaf stems close in, makes a confusion of purpose.

Problem III. Solution 1—Is good—leaf forms might be better where they join. Sol. 2—Ornament good—when evenly spaced the stems would be more rhythmic if running all in same direction. Space between stem and lower line too narrow. Sol. 3 arrangement is good, the forms might be simpler, not so many lines running to center.

Problem IV. Would be better with one only of the large square ornaments, design looks crowded and yet thin, owing to the number of thin lines in ornaments.

A. L. D.—Problem I. In the three solutions the background shapes have not been well thought out. The character of the tree growth has not been given and the line is not carefully drawn, being thick and thin in spots. The single stem winding through center of panel, cuts it in two similar divisions; the problem is one of division into *unequal* and *contrasting* spaces. The first solution is the best. "The facts" are good, especially in regard to fruit, but more could have been made of the flower.

Problem III. Solutions are all simple and fairly well spaced, the lines above and below apple might be more carefully thought out, also below the flower, at present they are rather meaningless.

Problem IV. The all-over patterns are good, perhaps a little crowded. Sol. 2 would be better if the points did not turn in so many directions, or if instead you had used five triangular shapes to represent calyx.

L. L. M.—You have a good subject but have not made the most of it. The drawing of the flower does not solve problem I, see C. W.

Problem II. All three problems have an attractive look as sketchy line schemes for a panel design but they are not drawn with sufficient thought and are unfinished. The flower cluster should be simplified, there are too many buds with stringy stems—stems should be made with double line. You are good in invention but careless in execution.

Problem III. Sol. 1 is good in general line movement and spacing, the stems should reach to base. The design would be better without the stringy buds. Sols. 2 and 3 would also be better without the buds, the small motif is not good, the spacing also would be better without the secondary motif.

Problem IV. The three all-over designs would also be better without so many confusing bud stems.

A. W. L.—Problem I. This is not a composition, it is simply a drawing of a flower placed in the middle of a rectangle. To be a composition it should be so placed in a rectangle as to make agreeable and varied background spaces on all sides, usually more than one flower form is necessary to compose well as there should be contrast of masses. It seems as if you could have made more of your motifs from a decorative standpoint, but they are simply seen.

Problem II. There is some good in this design but too many small areas both in design and background and too many lines running to one point. The direction of the curve is also not well considered.

Problem III. Sol. 1—A longer section would show the design to better advantage. The design is not bad but with more practice you will develop the power of more invention in form. The second solution is not so good, it looks incomplete; the stem running into bud at right angles is not a good arrangement. The areas are all too much of one size.

Problem IV. Too crowded and ornament not interesting.

M. M.—You have not understood Problem I. See C. W. Facts taken from flower are good but could be seen more decoratively—look for the decorative lines of each part and make that part into an ornament excluding all lines that do not lend to the decorative effect.

Problem II. This is simple and good in line with the exception of the V form in center which is thin in terminal ornament. This would be better omitted. The double line at top should have some support at the side.

Problem III. Sol. 1—This is good but would be better if the width of the flower, leaf and space between was not so similar. Sol. 2 has the same fault in vertical space division, the conventionalization of berry is good but the crossing of the two leaves is too marked and gives the effect of two hands crossed with fingers spread ready to scratch, and leaves a disturbing effect on the mind.

Problem IV. Sol. 1—This would be better with only the side view ornament which is good. The space is a little crowded. Sol. 2 is good, but also crowded, and the bud ornament does not harmonize with open flower which would be better alone.

E. P. H. Problem I. Sol. 1—Flowers should be arranged in principal and subordinate mass. Main line movement good. Spaces at base might be better thought out. Sol. 2 is not so well composed, spotty, leaf should be larger. Facts are simply noted but might be more decoratively treated. It

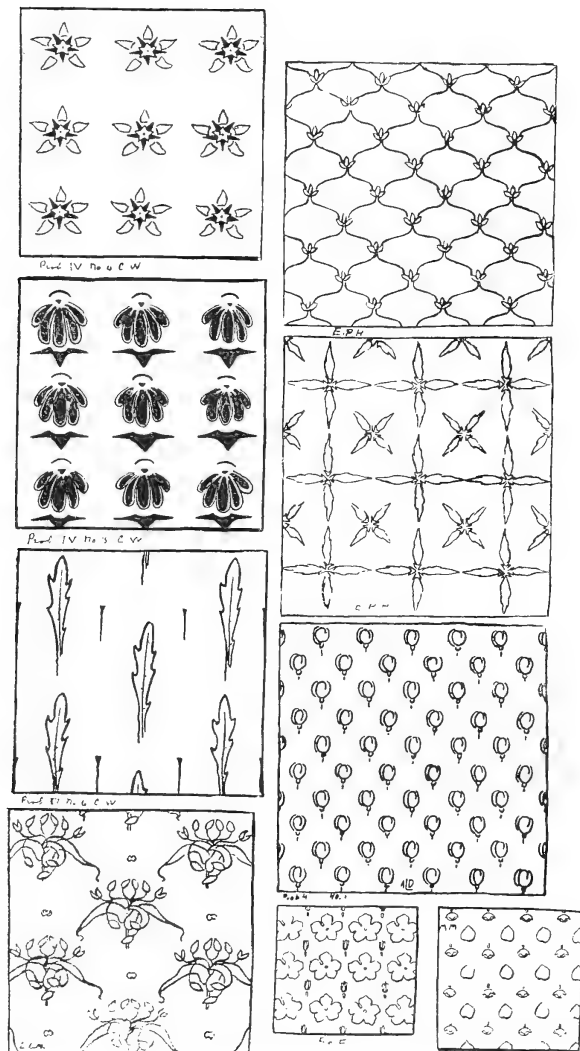
seems as if you could have gotten more out of the subject.

Problem II. Sol. 1—This is simple and vigorous. Central design should have been wider at base to balance spread of leaves; curve of stem not carefully thought out. Small border below should have been more set to hold the loose design above; blossom without leaf or stem below is not at its best—outline not unusual enough. Sol. 3 is better. It is unusual and interesting, simple and bold, perhaps it would have been better if central stem came to base and lines on either side connected with leaf. The space above line of flowers might perhaps be less and the stems of flowers crossed a little higher up. Sol. 3 does not answer the requirements as a panel.

Problem III. Sol. 1—Support of blossom too weak and thin. Sol. 2. Too many small spaces in lower part of background. Sol. 3 is rather nice, third division of leaf might show somewhat on other side of stem.

Problem IV. Both 1 and 2 solutions are good; No. 2 perhaps a little angular. No. 3 is not an allover pattern.

D. C.—Your facts about flowers are well observed but not carefully drawn, a little more attention should be paid to each part as a motif for design, think of it as the main form and make it as beautiful as you can and decorative in itself. You have not drawn your flower in accordance with the problem. See C. W. Your solutions of Problem II are unfinished sections of a long panel and it is impossible to judge of them as a whole. The three small borders are too hastily drawn but are well spaced, the forms are not interesting because so carelessly drawn. The allover pattern is too crowded, it would be better with the open flower or bud alone.



L. J. Problem II. None of the solutions are satisfactory as designs, neither object or background is well considered—there is no balance of any kind. The facts of flowers are too indefinite. In the borders No. 1 is rather the most interesting ornament but there is not sufficient order in the arrangement to make a border. The allover patterns are not well spaced—and in No. 1 the arrangement is too naturalistic and commonplace.

E. F.—Your "Facts about flowers" are good as far as they go, but not well drawn.

Problem III. The five pointed ornament is good, but the other is not sufficiently heavy to balance it. The leaf border would have been better without the small flower which is too small. The other border is not well thought out. The two allover patterns are well spaced but rather commonplace.

L. B. H.—Facts taken from flowers. You have seen your motif simply, but you have not seen enough. You could have found a number of more interesting facts and seen them more decoratively—that is—made them into good ornaments to be used for design.

Problem II. This is not very good, it suggests an abnormal growth which is always unpleasant—then the design is not well balanced, is too weak at base and lines run into one another too abruptly. Study to make a more even, purposeful line.

Problem III. The border marked III is the best, the stem is perhaps a little clubbed, but otherwise the border is good. Sol. 2 has too many areas about the same form and size, the small figure between does not add to it and the whole design leaves a confused and indefinite impression as if the designer had no real story to tell. Sol. 1 is too crowded, and background not well considered.

Problem IV. The same criticism applies to Sol. 1 and 2 and 3, crowded, meaningless, or the meaning not made sufficiently evident. At the same time there is a boldness about all the work that suggests a latent power which may develop with study.

TREATMENT FOR PRIMULA (Primrose)—(Supplement)

Mary Alley Neal

FOR the flowers in the lightest parts use Rose, in the darkest ones, a touch of Ruby, in the shadow flowers paint with Black and Rose, and dust when dry, with Rose, centers of Albert Yellow, shaded with Brown Green. For leaves, use Yellow, Royal Brown and shading Greens; in places soften the green with Ruby and Sepia. For stems use Ruby and finishing Brown, Ruby and Blood Red. For background use warm Gray, Albert Yellow, Brown Green and Copenhagen Gray.

In the second fire use same colors and strengthen where the painting has lost in the firing.

ROSE STUDY

Alyce Barber Pflager

FIRST fire: Lay in design very cleanly, leaving all shadows for second and third fire. Center of rose should be Rose with light wash of Lemon Yellow where petals join body of Rose; treat bud in left hand corner in same manner; right hand rose lay in with American Beauty; back of rose with Pompadour; darker touches with Finishing Brown, wiping out turned-over edges of petals. Keep leaves light, using Lemon Yellow and Blue Green light for the lightest, and yellow Green shaded with Rose for darker; stems, Yellow Green, shaded with Rose.

Second fire: Wash in background, upper left hand corner Lemon Yellow, shading into Blue Green; right hand corner, Lilac; foreground, Yellow Brown; with washes of Olive and Shading Green in shadows under flowers and leaves.

Third fire: Strengthen center rose with Rose on shadow side; light washes of Grey in shadow of petals; right hand rose strengthen with Ruby or Crimson Purple; back of rose, wash with American Beauty on high lights; strengthen with Ruby or Crimson Purple; wash in rose in background with Rose; strengthen leaves and background, letting background run over shadowy leaves; keep colors pure, and stipple rather than pad dark parts of background.



PRIMROSE—MARY ALLEY NEAL

ROSE STUDY—ALYCE BARBER PELAGER



CLUB NOTE

Annual meeting and election of officers of Atlan Club took place Friday, June 5, 1903. Following officers were elected: Mrs. McIntyre, President; Mrs. LeRoy Steward, Vice President; Miss Helen M. Topping, Secretary; Mrs. Frazee, Mrs. Humphrey, Miss Lillie Cole, Trustees.

DOG-TOOTH VIOLET

Emma Armstrong Ervin

THIS is one of the early spring flowers and one most easily adapted to designing, being both delicate and graceful in its natural state. The flowers are found in two colors, one being a bright yellow with brown stamens and markings, and the other very delicate. In the latter the three outer petals are a pale lavender shading into yellow which deepens to a brown green where it joins the stem. The three inner petals are white, beautifully marked by three bluish purple lines running full length of each petal. The stamens are bright yellow and the pistil white in this flower. The leaves are sometimes entirely green but more often are variegated with purplish and whitish blotches.



THE CRAFTS

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SIMPLE FURNITURE

ITS STRUCTURE IN RELATION TO USE AND BEAUTY

Elisabeth Saugstad



ANYONE who knows enough of tools and wood-working to make true joints, even a girl or a woman having sufficient strength, ought to be able to make simple furniture; and it will be useful and beautiful just in the degree of the common sense and artistic feeling exercised. It is a delightful craft, and the results, when good, are so real and thoroughly worth

while that the time and labor spent seem fully justified, particularly when we stop to realize how long a piece of furniture may outlive us, and that it depends on our taste and skill whether it is to be a constant source of use and pleasure or an unsightly encumbrance to generations yet unborn.

So it is safe to assume that every true craftsman desires his work to possess the qualities of honesty, usefulness and beauty in their best sense, and he must, therefore, start with some conception of what constitutes them and what to avoid in seeking them.

Much of the modern furniture claiming to fulfill these ideals is characterized by uncompromising angularity, aggressively obvious construction, unnecessary weight and size, and a striving for "originality" and "quaintness," and while it may be simple and honest enough, it is in a crude and more primitive form than should be accepted as a model by one who wishes his work to represent not only his own degree of culture, but that of his times.

Experience and common sense are the best guides in determining the functions of use, which at once cuts out greater size and weight than is necessary for strength and proportion, as, besides the inconvenience, this would tend rather toward weakness than strength by causing greater strain in moving.

Honesty means sound material, the finish which will best preserve it and develop its beauty and true joints of the kind best fitted to stand the strain to which they are likely to be subjected; and while the necessities of such construction must be frankly met, the latter need not be necessarily obvious. Keys and pegs are good and appropriate in some places, as are some other forms of primitiveness where they fill more or less simple and primitive uses and conditions, as in camp or summer cottages, or furniture for out-of-doors; but their indiscriminate use shows either affectation, poor taste or ignorance of the possibilities of legitimate construction and design.

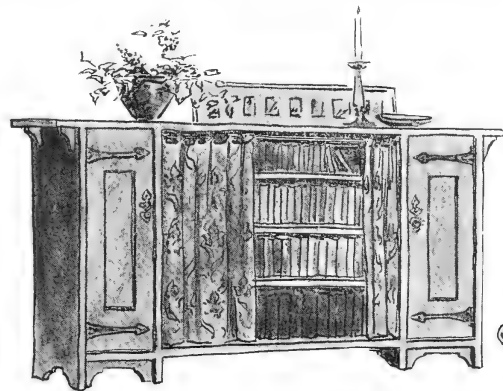
There is a fallacy widely current and particularly pleasing to those having only some technical knowledge, that if a thing is hand-made it must be honest and beautiful. The truth is it may be worse than anything turned out by machinery, for that is limited, but there is no limit to the atrocities the hand can commit unless guided by intelligence, honor and taste. With these, that which gives hand-work its particular charm and value, is the possibility of expressing individuality, freshness and variety; of adapting each piece to its particular place and purpose, and the pleasure there is in the actual using of the hands, with the sense of poise and power it gives.

We hear very much of the beauty of simplicity, but that

does not mean that all simplicity is beautiful, for a simple design may show as great ignorance and lack of sense and artistic feeling as the most complex, useless and ornate. The simplicity which is beautiful and so much to be desired, is that which comes from knowledge, intelligent selection and elimination, whether it represents primitive directness or culture and refinement of the highest type, and it may be delicate or bold, light or heavy and curved or straight, as most fittingly meets the demands of the given conditions.

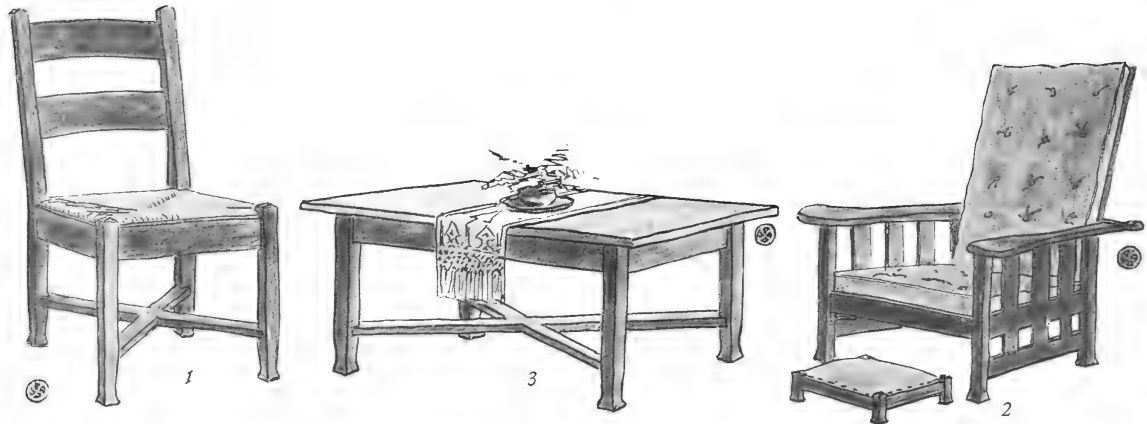
Fine proportion, or the right relation of the height to the length and width, and of each part to the whole, is an essential element of beauty in furniture, for the lack of which nothing can compensate. But there is, also, the beauty of fine lines, of true workmanship and the finish that is as pleasing to the touch as to the eye, with its delightful texture and soft lustre. There is the beauty of the wood, with the grain free and bold, as in ash and chestnut, of endless variety in the silver rays of quartered oak and finer and more subtle in mahogany. There is the beauty of color in the warm ivory tones and pale yellows of the lighter woods; the golden red or deep wine tones of mahogany; the fine quiet brown of walnut and fumed oak and the soft, restful browns and greens which can be made by stains.

There are almost endless decorative possibilities in metal and leather, while frankly and fully filling the most utilitarian purposes; and turning is a fine old craft which may show, in the hands of an artistic craftsman, the same qualities of fine line and spacing as any other form of design, and affords a welcome change from the prevailing angularity. Flat carving, in low relief in very simple and conventional designs—and I cannot insist too strongly that they must be conventional—when used with a sensitive feeling of reserve and fitness, offers a legitimate and charming means of beautifying even simple furniture.



But exaggeration and affectation of all kinds must be carefully guarded against, and a striving for something "different" or "odd" is almost sure to end disastrously. The craftsman young in the work need not fear being too conservative. He will find it far more satisfactory in the end to model his work on some good style in harmony with the conditions he has to meet, and when he has adapted it to his own particular needs, he will usually find he has produced something individual, and, better still, appropriate.

A modest realization of his limitations and a willingness to



keep within them until his powers have developed by observation and experience, will save him many disappointments and failures.

He must realize, also, the limitations of his wood, of his tools and of construction; but if he is a right craftsman, these should help rather than hamper him and give character to what he does; and it is just by his frank acceptance of these things and his use of them, that his sense, skill and taste are shown.

There must be considered, too, the conditions of use and the place to be filled and the more or less arbitrary dimensions of certain parts, as the height of a chair or table, which help determine the general proportions.

Each new piece will have its own little problems at every step for which only the most general rules could be given, but on the right solution of which the final success depends, for every part and detail must be planned in relation to every other part and to the whole.

The plan which I follow is to think out as clearly as I can the piece of furniture which I wish to design and then make a small sketch of it with pencil in perspective. When I have worked out my idea as nearly as I can in this way, I make a full size working drawing of the front and side elevations on heavy wrapping paper, with charcoal, for with that it is easy to make changes, as it is quickly rubbed off with a bit of chamois. This I pin on the wall to the height to which the object would reach. Then I study it carefully in every detail, sometimes keeping it there for days or weeks, trying it by every standard I know and

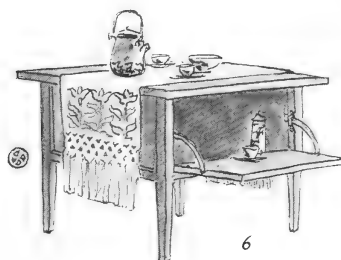
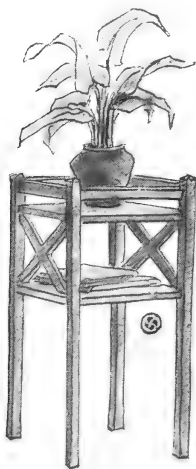
making changes as they suggest themselves, nor do I allow it to be put into execution until it is the very best of which I am capable. It is hard for the beginner to think in solid dimensions and realize how a thing will look when finished, but this comes by practise and much measuring of things already done.

It is a good plan to cut out, sketch or trace every piece of furniture, or detail, that seems good or suggestive, from catalogues, advertisements or any source whatever and keep them in a large, stout envelope. I find this better than a scrap-book, for there come weeding out times, as taste and judgment ripen and develop, and a single sketch is more convenient to work from.

These are the general principles and methods of which I have tried to make specific application in the types I have chosen for illustration.

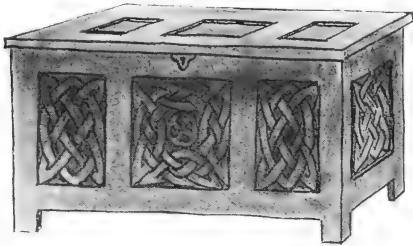
The design in illustration No. 1 fills most satisfactorily the requirements of a dining or writing chair and makes a charming stool without the back. It is dignified and pleasing without pretensions to either elegance or primitiveness. It is strong and thoroughly well braced to stand the frequent moving necessary, but not so heavy it cannot be moved with ease. It is high enough to support the shoulders comfortably without interfering with waiting on the table, and the back slopes slightly, for a perfectly straight back is not comfortable. The legs are shaped at the bottom and gain much in appearance without losing strength or stability.

The easy chair in illustration No. 2, not being moved so often, and the whole sentiment being one of comfort and repose, is larger and heavier. The seat is lower—and the lower it is, the deeper it may be—and is usually more comfortable if made



to slope toward the back, which must be high enough to support the head and shoulders comfortably.

The table in illustration No. 3 is a most accommodating model as it can be used, in different sizes, in the living room or library and the one from which the illustration is made I use as a dining table. It is strong in reality and appearance without being clumsy. The cross braces are set far enough in not to interfere with the feet, and the frame does not strike the knees. It has ball-bearing casters set in so far that the feet appear to practically rest on the floor. Straight grained pieces were chosen for the legs and braces and those with bold, flowing figures that composed well, for the top.



The closets in the bookcase, illustration No. 4, suggest many uses, and the doors offer an appropriate place for decorative metal work in hinges and fastenings, or very simple carving in low relief. Bookcases are usually from 12 to 15 inches deep, and a shelf should not be more than 4 feet long, if unsupported.

The chair-table, in illustration No. 5, is an old model and a very useful and attractive one. The top may be square, elliptical or oblong, and the legs may be square, but look particularly well, turned.

The tea table in illustration No. 6 is also a model which may be adapted to many uses. Of mahogany, beautifully made and finished, it is fit and fine enough for any place. Of

oak or ash, with metal work, it would delight a smoker for his den. It is a convenient sewing table, and may have a dozen uses on the porch.

SALAD FORK AND SPOON

Edith A. Ross

PYROGRAPHY TREATMENT BY KATHERIN LIVERMORE.

USE a fine etching point for this; keep the outlines very dainty and clear, as the beauty of the design depends on the delicate way in which it is treated.

Make the middle background of fine lines as indicated, the outer background may be stippled, or shaded flat, or burned very deep and dark to resemble carving; if the latter effect is desired, be very careful not to smoke the design; if it becomes smoked in places, erase with a typewriter eraser, as this contains enough emery to remove any slight discoloration.

The little seed pods should be done with the end of the point. A high polish is required; this makes it necessary to wax several times.

ANSWERS TO CORRESPONDENTS

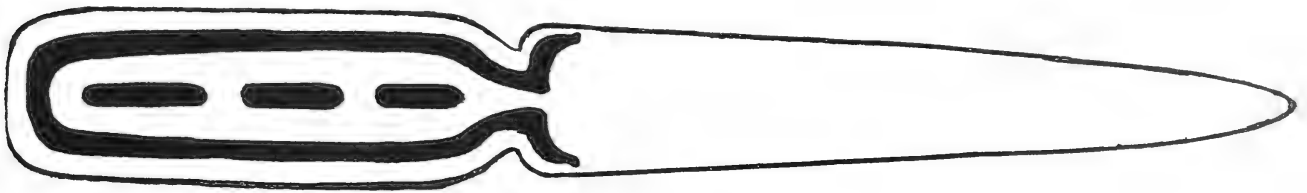
Mrs. C.—The tools for wrought leather work may be bought at the Guild of Arts and Crafts of New York, 109 East 23d Street. Calf and cow are the best kinds of leather to use.

M. H. B.—Some very good work can be done on blocks of wood, though by using the cement your work is made firm and you have the use of both hands for your tools.

The cement can be bought ready to use in one lb. cakes at 25c. per cake, though of course it is much cheaper to make it.

A. W.—The dagger saw blades for metal are very good. These come in twelve sizes, 00000 being the finest and No. 6 the coarsest. For heavy metal use a coarse saw, it is easier and does the work in less time.

There are many kinds of drills. A pump drill is not expensive and is worked by hand. Always start the place that you want to drill through with a pointed punch, then you are sure that your drill will stay in the right place.



METAL PAPER KNIFE—EMILY F. PEACOCK

THE paper knife is made of copper, brass, or silver in exactly the same way as the one described in the June number excepting that the design is etched instead of being cut out.

When the knife is made it must be thoroughly cleaned in acid solution and scrubbed with powdered pumice stone and water, then with whiting until clear water will stay over entire surface. Draw or trace on the design and scratch in with a steel point, being careful not to touch any part to be etched with the hands; if this should happen, wash again, as the acid will not act on the metal where the hands have been. Paint in the background with asphaltum varnish, using rather a small brush; if the varnish is too thick, thin with a few drops of turpentine. The painting must be done neatly and carefully, taking care to have the edges very even as the etching will follow the line of the asphaltum exactly. Paint over the blade and back of the knife, covering every part except the design. If there are any brown spots or streaks cover again with the asphaltum. When this covering is thoroughly dry make a bath of nitric acid, one

part, and water one part, in a glass or porcelain dish. Put the knife in and if all conditions are good fine bubbles will soon rise from the exposed metal. The bubbles should be clear and distinct. If there are no bubbles the metal has not been thoroughly cleaned, or the bath is too weak. If the bubbles come so rapidly as to give a cloudy effect the bath is too strong. If all the conditions are favorable the etching will be finished in twenty minutes or half an hour. To see if etched deep enough, take the knife out of the bath with a piece of wood; wash in water and examine it. If it is not sufficiently deep put it back in the solution. When etched deep enough take out and wash thoroughly in water. Heat it for a few minutes in a strong solution of lye, when the asphaltum can be easily removed with a cloth fastened to a piece of wood. The lye must be made in a porcelain or agate dish. Wash in water and dry. If the edges are uneven anywhere file them down with a raffle file. Polish with fine emery paper, then with powdered pumice and oil. Avoid inhaling the fumes of the bath while working over it.

CHICAGO CERAMIC ART ASSOCIATION

At the annual meeting of The Chicago Ceramic Art Association, held May 9th, at the Art Institute, Chicago, Ill., the following officers were elected:

President, Belle Barnett Vesey; First Vice President, Rhoda M. B. McCreery; Second Vice President, L. S. Eastman; Recording Secretary, M. Ellen Iglehart; Corresponding Secretary, Grace Polglase McMurtry; Treasurer, Albert Keith; Historian, Anna B. Crane.

Chairman Standing Committees: Art, Mrs. A. B. Ryan; Literature, Mrs. Thomas Bradwell; Social, Mrs. William H. Chadwick; Printing, Mrs. Laura M. Starr.

Custodian Official Papers, Victorine B. Jenkins.



Mrs. D. C. B.—A new kiln is quite likely to flake off for a time but at an over glaze heat this should do no injury to the china. You will find directions for firing Rev. kiln in December 1902 adv. and February 1902 ans. to corres.

Your trouble is that you burn too much oil—A good firing should clean out chimney. Bleu Camaieu is the French for monochrome blue decoration and may be in any shade of blue. You will find treatment for flat enamels in April 1903 ans. to corres. M. O. C.

S. J. W.—You will find addresses of gold you seek in our adv. pages. To prepare Hancock's paste for gold use just enough fat oil to make the powder stick lightly together, breath (not blow) on it with the mouth wide open to get moisture in breath, several times, rubbing it in, this helps to keep the paste open longer—thin with oil of lavender until a little too thin then breath again on it and mix it until it thickens to the right consistency, this will work a long time without adding anything. When too stiff add a little more lavender in the same way.

For small dots turpentine can be used instead of lavender. Water paste is not quite as satisfactory to use as that mixed with oils. Ivory yellow is the same in all makes of colors. To get a deep black the only way is to go over it until it is black enough: for a dusted ground you can dust first with banding blue and then with black but two dustings of black should be enough to make a deep tone.

A. B. H.—Almost all greens have a tricky way of turning rusty brown when used too heavily or underfired, especially on Belleek. Refiring hard will sometimes bring the original color but it is uncertain. Possibly ivory glaze over the dark green tint would increase the tendency to turn brown. We are inclined to think this must have been the case with your shading green as that rarely changes to brown. The case of the fired and burnished gold appearing on the surface of turquoise enamel applied over it, is very curious, we have never heard of such an occurrence before and doubt if it will repeat itself. Possibly it was a very hard fire. Usually when putting enamel on a gold ground it is better to leave a little spot of white china so that the enamel will hold better, this would also avoid the blistering effect that sometimes occurs over gold. We should think you might cover your enamel dots with fresh enamel, or with gold to make them again uniform in appearance.

G.—You will save yourself a great deal of trouble if you use the Dresden Aufsetzweis in tubes instead of powder enamel. When very fresh sometimes a quantity of oil comes out when the tube is first squeezed, this should be removed, then mix a little oil of lavender with the enamel until a very little too thin, breath on it a few times and it will thicken up to the right consistency for jewels or modeling and will stay open a long time, when too dry add a little more lavender in the same way. If you added lavender and breath instead of turpentine to your powder enamel mixed very slightly with fat oil, you might avoid the bubbling. The same treatment succeeds with raised paste for gold. If the paste does not hold together it needs a little more fat oil.

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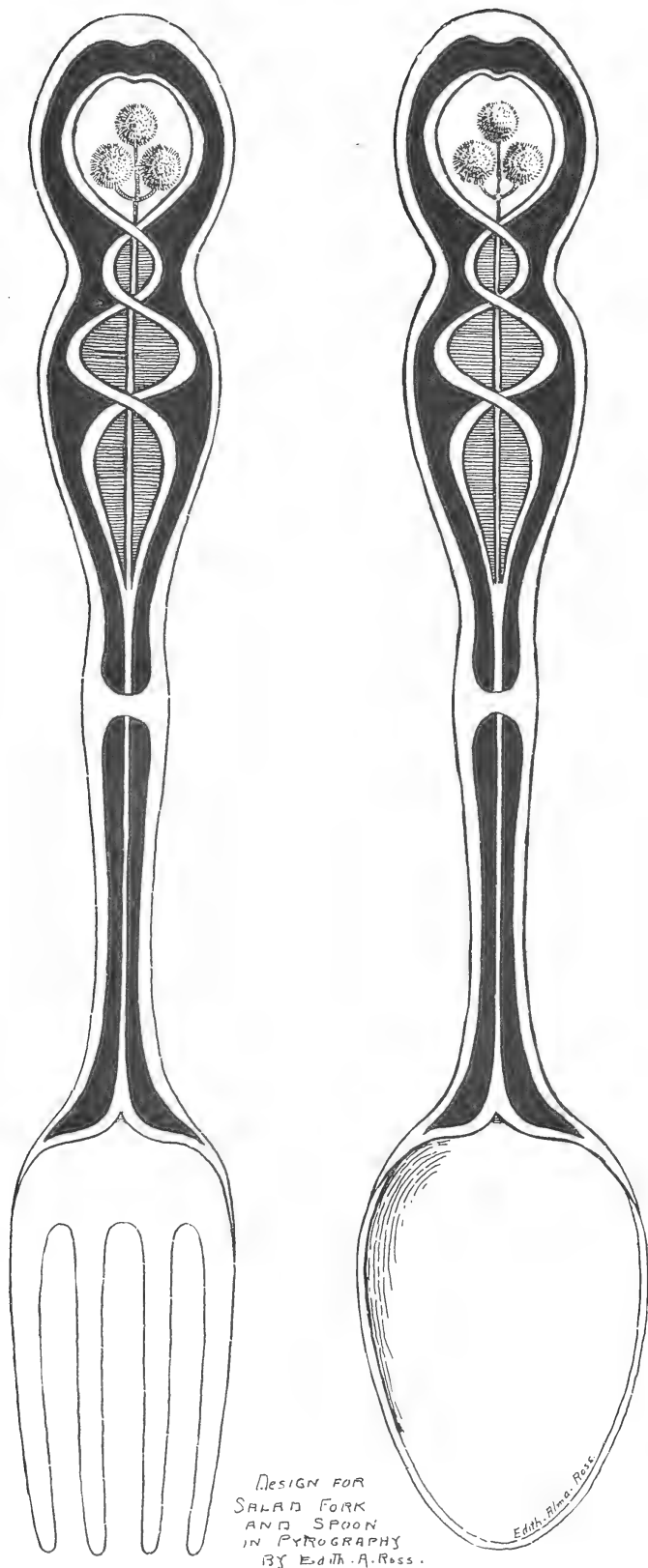
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AND SPOON
IN PYROGRAPHY
BY EDITH A. ROSS.

Edith A. Ross

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR.

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KERAMIC STUDIO

Vol. V, No. 4

SYRACUSE NEW YORK

August 1903



WE call attention to the prize conventional flower study by Miss Maud Mason, given with this number of *KERAMIC STUDIO*, in connection with the coming design competition. Of this study Mr. Froehlich said in the May number: "Of the conventional studies in color, Miss Mason easily carried the honors. Her sketch has that most *precious quality* known as individuality. What it is can hardly be expressed in words, as it is purely emotional. If for instance, four painters make a study of the same flower, we will have four interpretations; one may give us a color scheme, another a line motive, a third the largeness of simplicity, but each dominated by a personal quality. I find in the study of Miss Mason dignity and restraint; the shapes are not crowded with detail; the parts are so well related that one can take in the design at a glance." We trust that our workers will study this design carefully before sending in work for competition, they should find it exceedingly useful. The regulations for the competition will be found on the back cover of this magazine.

+

REVIEW OF THE LEAGUE EXHIBITION

Mary Chase Perry

NOW that a little time has elapsed since the first showing of the work done by the members of the League during the past year, the exhibit may be regarded more impersonally as a whole. At first one is inclined to feel the attraction of individual pieces. With the advantage of a little perspective we can draw numerous lessons which should be of value and establish something of a precedent in similar exhibitions.

The little gallery at Taft & Belknaps proved the fittest setting and lent a dignity and self respect which has not always been achieved by "hand-painted dishes." The quiet tone of green in the background and shelf covering was unobtrusive, yet harmonized charmingly with the color decorations. There was no attempt at anything fussy or spectacular in the arrangement; the pieces were well placed so that they could be examined without the "congregation side" being turned to the wall.

It was a signal that the superfluously dainty showing is no longer acceptable and white frilly draperies are relegated to show cases and shop furnishings.

The mere demand for self-respecting accessories proves that we have left for ever the forget-me-not and daisy studded path which perchance led some of us into the china painting field, that we have outlived the instincts of a period of prettiness to enter upon the substance of a well considered craft.

That is one lesson and it is well worth pondering, especially in the centers through which this exhibition will pass in its itinerary. Let us bespeak for it in each place an appropriate setting.

Concerning the exhibition itself, as classified in the little catalogue, there is a greater showing in the comparative branch than in the educational. This shows one thing surely—that our workers are not dependent upon stimulants in the form of medals and honors.

The comparative class offered the opportunity for observation and comment upon specific treatment of certain shapes and merely for the benefit to be derived in this way, yet by far

the greater number of pieces were entered under this head. The vases are treated with every scheme of color from dark to light, yet with the deeper tones predominating and they hold their own better too. It seems less easy to make the more delicate conceptions feel at home; unless they have some especial strength of drawing or design, they seem to lack the weight which would keep them on a par with the ideas which are expressed more boldly.

The bowls are something of a novelty, in that their shape is not commonplace. A number grouped together proves very interesting in showing how utterly unlike the same shape appears under different treatment. It makes a good demonstration of the apparent change in dimensions, following the use of varying lines.

The opportunity for decoration inside, produced some interesting results in narrow bands at the top. The shape too, seemed to invite most pleasant arrangements of a conventional order, so that almost without exception, the results carry some form of a "pattern" either repeated or distributed in a formal manner. Those with borders are especially charming and are distinctly a growth of the original idea which inspired the form. The proportions are perfectly considered, and the decorations not at all as an embellishment, or an applied decoration, but as a part of a preconsidered plan for the whole.

While each motive shows plainly, the main feature is subordination to the general decorative effect, which it goes to make up. It retains the character without its being thrust upon one with crude realism. In the same way that a pear for instance, might be intolerable as a decoration if painted with all the veracity of nature, yet, if properly used as a theme or motive, the most delightful and appropriate designs can be evolved.

Conventional decoration is the main thing—that is another lesson.

The plates show much more uniformity than those of last year, suggesting that ideas in general concerning decorative principles are less divergent. This is one of the good educational results of an exhibition of this nature. Also, *note well*, for all there were no restrictions in this regard, the plates almost as a whole show conventional treatment. Why is it? Not because the decorators were obliged to follow certain lines; not because there is not still a latent love for the "picture," but because our good decorators, and those whose desire it is to be well classed, are waking up! They are recognizing not only the possibilities and limits, but also the appropriate application of their work. Without coercion they are finding themselves. Some of them have been a little ashamed of it, and a little slow to admit and demonstrate their conversion—but behold!

The borders are restful—and such a relief in suggesting a uniform service. Some of the most simple ones are the most pleasing, one or two being made up of a repeated unit, which in itself would seem almost inconsequent, but which assumes great interest and charming decorative character by repetition. Let this be another lesson.

As a whole, less lavish display of color is in evidence than heretofore—especially in combinations. Soft greys and browns in monochrome are used on one or two pieces with the happiest results, indicating that if the design is good and well adapted, it does not demand numerous colors or great embellishment of gold to carry it out.

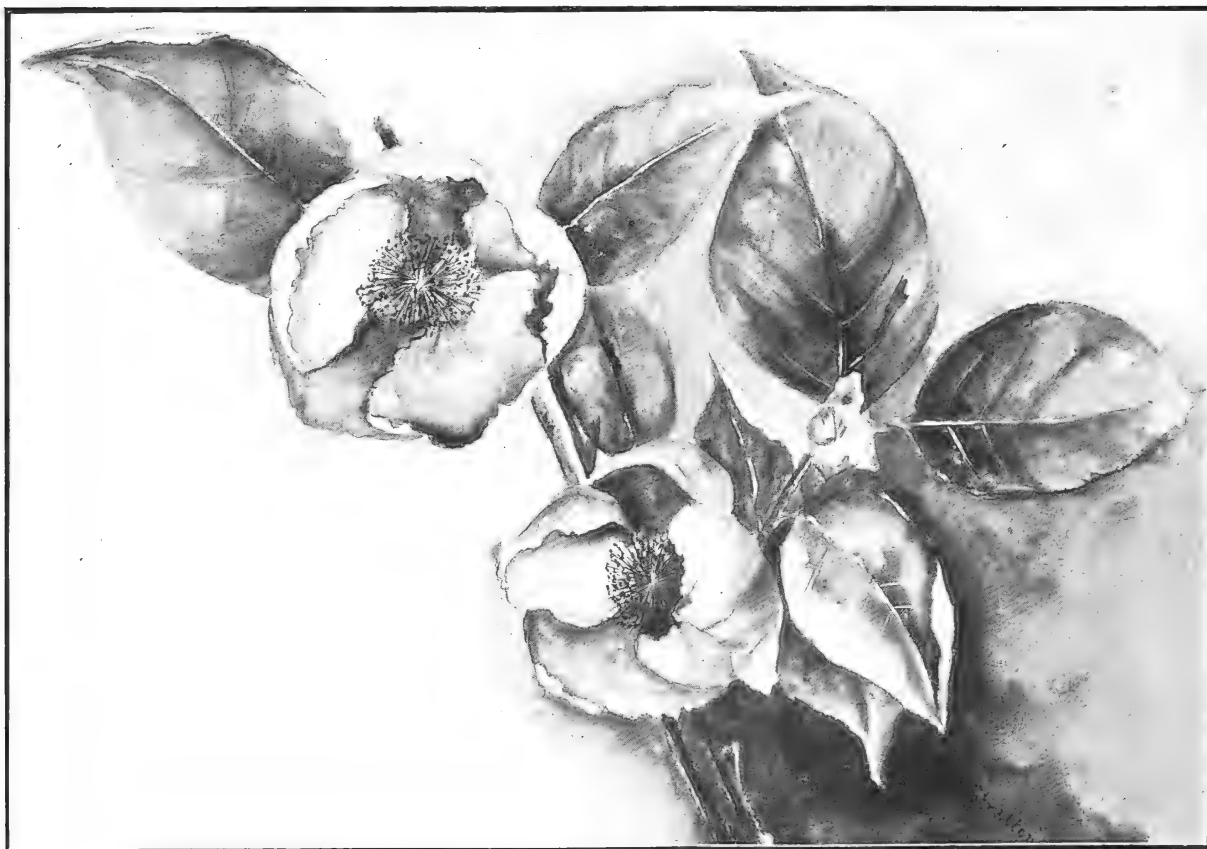
Regarding the educational portion of the exhibit, although the contributions are not as generous, yet what is shown is extremely good. Each class is well represented by thoughtful work in its special line. The "Outlines for a pitcher" show some which are graceful and practical, in that they would "pour well"—this is the first question a manufacturer asks in regard to a proposed shape and it is as well to make a sensible demand of the kind at the outset. The handles too, are a point which has needed much attention in order to make them less ornate and at the same time give a good "grasp."

The candlestick problem received considerable attention, and for a first attempt in the line of clay work, some very praiseworthy efforts are shown. In point of form, these are extremely interesting aside from any further attractiveness added by glaze. In fact those which have no glaze at all, but were fired to a mellow red or yellow are very effective, not only as examples of ceramics but even more as results of a study of form. One cannot help having more feeling and understanding of form, after having built up the shape with clay. It forces one back to foundation principles with most beneficial results.

The designs for tiles are so varied that they can not fail

to attract attention and may seem even startling, especially in places where the technical processes are little known. They give excellent opportunity for practice of precepts in modern teaching of design. Possibly some of our decorators who have not yet "arrived" will view them with disdain and think their reproduction not worth while—but let them see them a second time and a third, if necessary, they will happily discover their reason for being. It will be seen that most of them illustrate a point or principle in design, such as opposition or subordination. Looked upon from this point of view, and not merely from a standpoint of prettiness, they will bear much study which will show fruit later on. Then too, all of these classes in the educational branch indicate the process of procedure, and show the manner in which such designs are carried out so as to be acceptable to the manufacturer. In other words they show the amateur "how it is done," and the proper manner in which to express latent ideas.

The object of such a line of work was the pursuit of a study course, not alone to make things, but far more important to broaden one's conceptions and raise the understanding and *appreciation* of whatever is really good.



SWAMP DOGWOOD DESIGN—CORA STRATTON

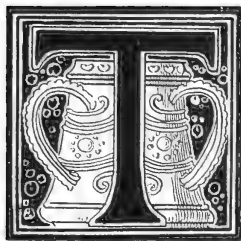
SWAMP Dogwood is a white flower. After getting a correct drawing lay in the background with Copenhagen Blue, Baby blue shading into Carnation and Primrose Yellow. Leaves are a light green, use Yellow Green, Brown and Shading

Green. Shade the flowers with a gray made by mixing Baby Blue and Carnation.

For centers use Yellow Brown and Yellow as in wild roses.

CLAY IN THE STUDIO

(Tenth Paper.)

Charles F. Binns

HE critical period has now arrived when the clay is to pass through the ordeal of fire, to perish or to persist. Before entering upon the details concerning kilns and their use a few general observations upon fire and its application to pottery will be necessary. The following paragraphs should be well studied and thoroughly mastered for it is only by an in-

telligent understanding of the principles which govern the action of fire that one can hope to reach success.

The heat of fire is produced by the phenomenon of combustion which is a chemical union taking place between fuel and the oxygen of the air. The composition of fuels need not concern us here except to state that they contain carbon and hydrogen in varying proportions. Carbon under ordinary conditions is a solid. In its pure state charcoal and plumbago (erroneously called black lead) may be cited as examples. If a fragment of charcoal be heated to redness and supplied with a current of air it will glow and burn away. It has combined with the oxygen of the air and has passed into a colorless gas known as carbonic acid gas or carbon dioxide. If the supply of air has been deficient a second colorless gas may have been formed. This is called carbonic oxide or carbon monoxide and it contains only half as much oxygen as the first named gas.

Hydrogen is a gas, though it exists in combination with carbon as a solid or as an oil. Both pure and combined thus it is inflammable and forms a very important constituent of fuels. Burned in a current of air hydrogen forms water vapor but if the air supply be deficient it refuses to burn, retaining its form as a gas. In burning gas the constituent parts are in such a form as to take fire readily but both liquid and solid fuels must be so heated as to become gaseous before they will burn. Thus while we usually speak of burning coal or oil it is really the gas which is evolved from these substances by heat which actually burns. In elementary text books of science there are given many pretty and interesting experiments to prove the truth of these assertions. We have not space to deal with the matter at further length. The point upon which these facts bear is the condition of the atmosphere inside the kiln upon which all successful burning depends.

It will be seen from the above statements that the supply of air to the fuel is of the first importance. A heated chamber may contain gases which are characterised according to their chemical composition by one of the following terms:

1. Oxydising; 2. Neutral; 3. Reducing. The first term almost explains itself. It means that there is more oxygen present than the fuel actually needs for perfect combustion, or in other words, that more air has been admitted than was necessary. Generally speaking this does no harm except for the loss of heat occasioned by a rush of cold air. The oxydising gases are the simplest to manipulate and give as a rule the best results. The meaning of the term oxydising is that the atmosphere is ready to supply oxygen and therefore to oxydise any substance which may come within its power. This is not an objectional feature because almost all colors and glazes are already oxydised, they have all the oxygen they need and can take no more.

The term "neutral" is likewise easily understood. This condition also would be harmless but is extremely difficult to regulate. In fact in an ordinary burn one cannot be sure of a

neutral atmosphere and therefore it is best to work for oxydising conditions.

The expression "reducing" needs some explanation partly because the word has often been wrongly used and partly because the effect of a reducing fire is usually disastrous. The word "reducing" in this connection has nothing to do with temperature, nor with the rise or fall of the fire. It does not mean "decreasing." It has to do with the chemical nature of the kiln atmosphere and is the opposite of oxydising.

If combustion be allowed to take place with a shortage of air the gases produced consist in part of carbonic oxide and hydrogen. Both these have a strong appetite for oxygen and if they cannot draw it from the air they will rob the glaze, the colors and even the body of the pottery. None of these has any more oxygen than it needs and yet they are forced to part with it to the hungry gases. In doing this they are "reduced" from higher to lower oxides and hence the action is called reducing.

A simple illustration will help the student to understand the action. Iron oxide exists in several forms. One of these, the common red oxide, has two parts of iron to three of oxygen, another, the black oxide, has equal parts of iron and oxygen. The parts referred to are not calculated by weight but by atoms, iron weighing 56 and oxygen 16. Now if the red oxide of iron be heated in a reducing gas it loses one of the parts of oxygen and turns black, being reduced to the black oxide. If the action be reversed and the black oxide be heated in an oxydising gas it absorbs oxygen and turns red.

Most of the substances used in pottery are capable of losing oxygen and hence the reducing fire is objectionable.

Hard porcelain is purposely burned in a reducing atmosphere but we are not now dealing with hard porcelain though this may come later.

The conclusion to be drawn from the foregoing explanations is that, in firing, care must be taken to secure perfect combustion. A good draft and a plentiful admission of air are indispensable.

Kilns are of two types, the open kiln and the muffle. In the former the flames pass through the firing chamber and the ware is usually protected by saggars; kilns used in most potteries are of this type. In the muffle the flames pass around and over the chamber but not through it. There the ware is heated by radiation from the walls. Kilns used for overglaze painting belong to this class and also the large kilns used by makers of enameled bath tubs.

The Caulkins kilns are muffles and many of them are doing good work. For portable studio kilns there are no better to be bought. They have their faults—no kiln that was ever built has none—the capacity is small, a trouble inseparable from a portable kiln and they need a very powerful draft.

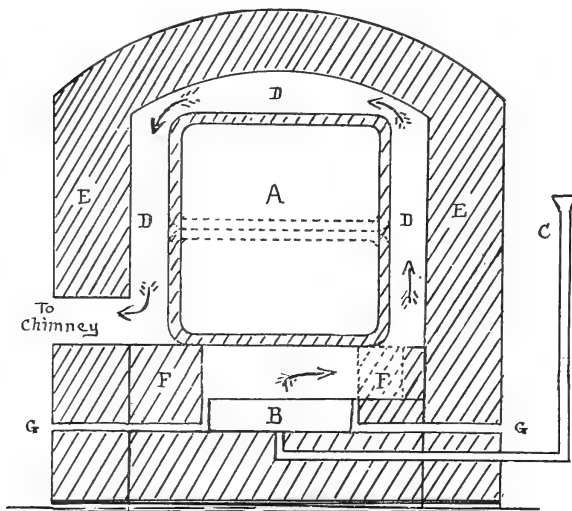
In the matter of inexpensive masonry kilns a state of evolution exists. Many have been erected and torn down, but little by little improvements are being made. The simple description of such a kiln and the rough sketch here given may aid some experimenters but local conditions vary so greatly that one must be prepared to deviate from the lines laid down.

The kiln is of the muffle type. The firing chamber consists of a length of flue lining which can be procured through a hardware dealer. It is made of earthenware and has walls about one inch in thickness. A length should be procured of which the section is as nearly square as possible or, two lengths may be laid one on the other as indicated by the dotted lines. If this be done it must be remembered that the upper chamber will be somewhat hotter than the lower. One end of the flue lining is filled up with fire brick set in clay. The front is left open but bricks are prepared so as to close it in the same way when firing. Only in this case the bricks are set together dry and the front is

smeared with damp sand so as to completely fill the openings.

The flue lining which we will now call the muffle A is set upon two piers of fire brick F F. The left hand pier is solid, the right hand, in the part shown by the dotted lines, is spaced out, brick from brick, so as to allow the flames to pass. These take the course shown by the arrows, passing over the muffle and down the other side, being impelled by the draft of the chimney. The chimney may consist of ordinary iron stove pipe or of terra cotta flue lining. It should be not less than ten feet high and secured by iron stays.

In the foundation of the kiln three passages are shown, one through which the oil pipe C passes to the burner B, the others, marked G, are air passages leading to the burner. Of these there should be at least four on each side. There should also be openings both back and front for the admission of air to the burner. The burner B is a shallow iron trough which runs the whole length of the muffle. The oil is supplied by the pipe C which is arranged so that the oil from a suitable vessel may flow into the open end. Thus the stream of oil, being in sight, can be easily regulated.



The opening in front of the burner must be filled with loose bricks so that lighting and observation may be easy. The outer walls and arch of the kiln are built of fire brick. The joints on the inner side should be filled with fire clay, on the outer side with mortar, or, better still, a second wall of red brick laid in mortar may be built outside the fire brick. This will secure a permanent job.

These walls need not be torn down if the muffle breaks but a new muffle can be set in from the front.

In order to start the fire a gentle stream of oil is allowed to run and a wisp of asbestos set in the burner will allow the oil to be lit. As the heat rises more oil is supplied and the air holes kept clear.

The degree of heat depends mainly upon two things, the width of the flues D D, and the height of the chimney. The flues should not be more than two inches wide, this will assist radiation from the walls and quicken the firing. The chimney supplies the draft and there must be plenty of this to secure a good current of air and to prevent reduction.

With regard to the duration of the firing no comparison can be made with the overglaze kilns which fire in about one hour. Pottery needs a long, soaking fire and must be given plenty of time. This kiln ought to give good satisfaction in

about four hours but if it runs to six or even eight hours the results will be better. It will be necessary also to attain a higher temperature if a shorter burn is made. For the work described in these papers Cone 1 is enough but Cone 1 in a larger kiln will mean Cone 2 in a small muffle if the same results are to be had. It is, in fact, almost impossible to lay down rules for any kiln, kilns have individual characteristics and must be governed accordingly.

There is no part of the profession of a clay-worker which tries the patience and the temper more than kiln work. Perhaps this is the reason why clay-workers have usually a good share of the philosophy of the Cabbage Patch. They have met and overcome so many troubles that they are no longer easily moved. The sooner our studio workers reach this stage of development the better for them and for their art.

A NEW POTTERY SCHOOL.

Mr. Edwin A. Barber, Curator of the Pennsylvania Museum, Philadelphia, writes to us that a Pottery School will be added to the Art and Textile Schools connected with the Museum, which number now about 1000 pupils. He wishes to find a competent and practical teacher of pottery work to take charge of the new department.

TREATMENT FOR TEA TRAY IN CHINA—(Page 93)

Henrietta Barclay Paist

DRESDEN Yellow Ochre and Chocolate or Dark Brown are the two colors needed to carry on this design. Lay in the flesh tones with a thin wash of Yellow Ochre and the background with a deeper tint of the same color. The hair and outline, teapots, etc., in the Dark Brown. The letters on background and teapots on border may be done in gold and give a very pleasing effect with the Cream and Brown. Or the letters may be in Brown and the border in Cream. In case of the letters being in gold they should be outlined or accented with Brown.

STUDIO NOTES

Mr. F. B. Aulich has opened his studio for summer and fall classes. He has on view some new studies of wild flowers painted during his recent trip through North Carolina.

Miss Mabel C. Dibble is spending the summer in South Haven, Mich., and will not reopen her Chicago studio before October 1st.

Mrs. Sarah Wood Safford will teach in Springfield, Mass., during the latter part of September, opening her New York studio the 1st of October.

Miss M. Louise Cowen of Toronto, Canada, is spending the summer on the Pacific Coast. She will open a class in Vancouver, B. C. in September, and will return to Toronto in October.

WILD CRABAPPLE BLOSSOMS

Nina Lombard

SKETCH the design with care, preserving the knotted stems which are characteristic of the Wild apple branch. Make a soft background of delicate grey green, using Apple Green, Rose and Copenhagen Blue; wipe blossoms out, keeping edges soft. Shade with grey for flowers and add a thin wash of Rose, deepening on the edges, where the blossom is most pink; keep the leaves in cool greens, using Apple, Moss, Royal and a little Yellow Brown. Stems, Finishing Brown. Centres, Yellow with Yellow Brown accents. Give the design two workings, accenting and modelling in second fire.



WILD CRABAPPLE BLOSSOMS—NINA LUMBARD



View of Paris from the hills of Sèvres, showing the National Manufactory.

GRAND FEU CERAMICS

III. THE MANUFACTORY OF SEVRES—ITS ORGANIZATION

Taxile Doat



HE Manufactory of Sèvres has for more than a century shone with a matchless brilliancy. No factory equals its renown, no productions have exceeded the sum of its artistic wares. The glory of its name can only be compared to that of the most illustrious ceramic agglomerations of the world, whether called Athenian Pottery, Etruscan Ceramics, Hispano-Moresques, Italian Faïences, King-te-tchin, Hizen, Oiron, Rouen, Meissen or Delft. And, although most of these names sum up the efforts of numberless factories, grouped in one locality, none of these groups has achieved the splendor of the isolated Sèvres.

This splendor is due to its powerful organization, from artistic, scientific and financial standpoints.

Since its creation under Louis XV in 1753, Sèvres has received annually royal or national subsidies, which have increased in proportion to its development, its productions, and also to the vanity or generosity of monarchs. Originally, under Louis XV, its subsidy was 96,000 livres. It was increased to 100,000 livres under Louis XVI. The Revolution had to adjust its protection to the disturbed finances of the time, but under Napoleon I, Sèvres received from the civil list 264,000

francs; under Louis Phillippe 300,000 francs, and Napoleon III gave it 350,000 francs from his privy purse, besides the variable subsidies made necessary by Expositions or by extraordinary undertakings.

After the terrible year 1870-71, the Manufactory became part of the Public Services, and received from the National Budget an annual subsidy of 500,000 francs, raised to 624,000 francs in 1880 and 652,000 francs in 1903.

This allowance is gradually paid out by the Minister of Finances, according to needs. It covers the expenses of the three departments, administrative, artistic, technical, at the head of which are, since 1891, an administrator and two directors (artistic and technical), thus forming a triumvirate of direction. Before that time there was only one head, one administrator-director.

The general personnel consists of 175 people, but the number of collaborators is unlimited, every Frenchman having the right to submit designs and models which may be accepted by the triumvirate.

The administrative department is composed of the administrator, the two directors, the museum, the library, clerks and guards. Salaries vary from 1,200 to 12,000 francs. Besides their fixed salaries the members of this department have free lodgings, heat and light, and a pension when 60 years of age and after 30 years of service. Extra pay is also given to high members of the staff and the guards receive free clothing. All these advantages stimulate the devotion to the common work. The department is under the direct orders of the Administrator, who is named by Presidential decree.

The artistic department is managed by the Director of the



Old manufactory of Sèvres, built under Louis XVI, now High School for girls.



New manufactory of Sèvres, built under Napoleon III, inaugurated in 1875.

Works of Art, who is selected by the Minister of Beaux Arts and assumes the responsibility of artistic productions. He determines the prices of executed pieces, buys the plans of decoration, designs, statuettes and all works which he considers beautiful and useful for the diffusion of ceramic art or the good renown of the factory.

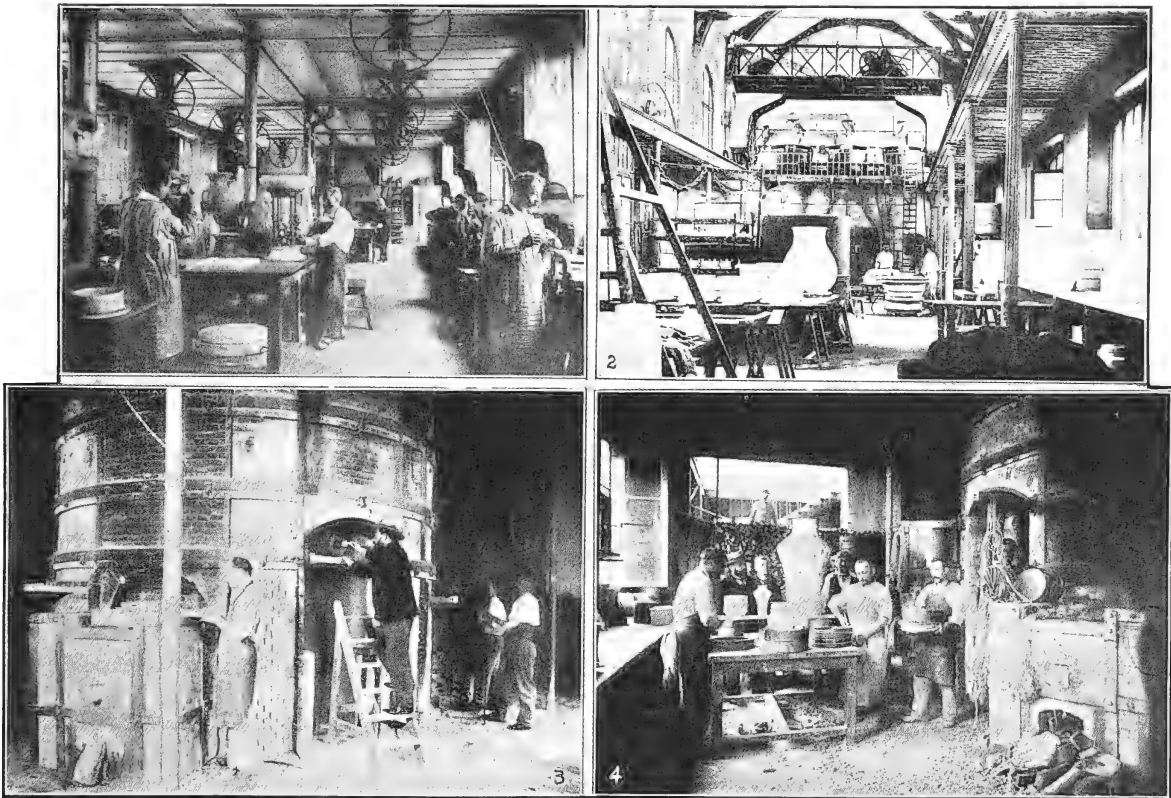
In order to determine the sale price of a piece, the sum paid to the artist is doubled, so as to cover the general expenses; so a vase for which the artist receives 500 francs will be sold for 1000 francs, and only in cases of exceptionally successful pieces is the sale price increased in a larger proportion. Every executed piece is paid for to the artist, whether it comes out of the kilns successful, insignificant or broken.

Vases, the decoration of which is made with the brush, remain unique pieces, whatever their cost; only pieces made with the chisel are reproduced or edited.

from the artists of the factory, and the statuettes which were to be executed in biscuit brought to the author only the purchase price. In order to extend and renovate the production and to attract more talent the purchase of designs outside of the factory was adopted for the Exposition of 1900 and maintained since; also the allowance of 25 per cent editing fees for all works of statuary reproduced in biscuit. As a result, the creative activity which was before confined to the factory, now comes from the outside, but to this invasion is due the magnificent display of the Exposition Universelle of 1900.

Only the fixed and permanent personnel execute their own works in the factory. Occasional collaborators are not admitted in the factory to which they do not belong, and their models, if accepted by the triumvirate of directors, are executed by others in the working rooms.

The third department, which in point of numbers, is the



1. Working room for mounting. 2. Working room for large casting. 3. Watching the firing. 4. Unpacking a kiln.

The fixed artistic personnel has at all times constituted a brilliant phalanx, united and glorious, which has left imperishable creations or reproductions. But this phalanx, which has at times reached the number of 50, has gradually decreased and includes now only 24 decorators, and hardly a dozen are designers, the others being technical virtuosi, clever to interpret.

The artists engaged before 1880 are entitled to a retreat annuity, but this privilege having been suppressed after that date, artists now only enjoy monthly salaries, to which are added at the end of the year allowances for supplementary work. These are irregular but justified by the moderate salaries. With these additions salaries vary from 2,400 francs to 6,000 francs.

Until 1895 nine-tenths of the decorative projects came

most important, includes the laboratory, the kilns, the mill and all the working part. It is managed by the technical director, who is and has always been a distinguished chemist, and who has the help of another chemist, chief of the laboratory.

It is in this laboratory that are mixed the colors, pastes and glazes, and in it constant researches are made for new discoveries. It is there that scientific reason takes the place of empiricism.

From this laboratory have come all the great ceramic discoveries of the century. There, were studied and determined the formulae of the *pâte tendre*, the hard porcelain, the new porcelain, the *grès cérame*. There, were created the magnificent palette of the painters, the colored *pâtes*, the *pâtes-sur-pâtes*, the colored glazes, the *flammé* reds of copper, the crystal-

line glazes and quite recently the mat glazes, the under glazes, and the colors of grand feu over glaze. In this laboratory has been invented the process of casting large vases and has been determined the regulation of oxidizing and reducing fires. There the coloring oxides are scrupulously analysed to insure their purity, and all materials are carefully examined before being used.

The different monarchs have in different ways manifested their interest in the Sèvres Works. Louis XVI liked to converse with Macquer. Napoleon I gave an order to Brongniart for the table of the Marshals, and this same Brongniart, who was for forty years at the head of the factory, created, according to the wishes of Queen Marie Amelie, a marvelously rich and fresh painting palette.

Napoleon III who said "thou" to the learned Regnault, sent to China frequent missions with a view to enrich the Sèvres Museum with the most characteristic specimens of the Oriental art, and the laboratory with the materials and colors taken from the Chinese potteries by diplomacy, and sometimes by force (Mission Scherzer.)

Like the artists, the workingmen were only until 1880 entitled to a retreat annuity. Recruited among the best men of the ceramic industry and also among the best pupils formed in the working rooms, these artisans are exceedingly clever. The care with which they do the glazing, the packing of the kilns and the firing has considerably reduced the percentage of losses which is unavoidable in all ceramic fabrication, especially of porcelain, and their work is an important factor in the beauty of the Sèvres products.

There are seven kilns of different sizes. The moulders, repairers of biscuit, number 22, with salaries varying from 2,800 to 4,500 francs, and there are 15 throwers with salaries varying from 2,000 to 4,600 francs.

Outside of the table services made from models of the factory, Sèvres accepts no orders. All the new models are due to the chief of the Works of Art, or to the imaginative creations of the artists. Under the monarchs, no piece was sold; all belonged to the kings, who gave them to friendly princes, to diplomats, high dignitaries, charitable institutions or to the Palaces of the Crown.

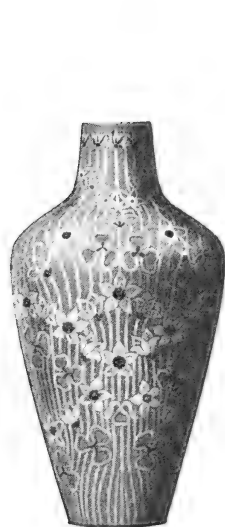
Everything has been changed since the Sèvres budget is voted by the Parliament (1870). Although a few pieces are

still offered as diplomatic presents, most of them go to the French Museums, and the others are offered for sale in a sales-room specially arranged in the factory itself. But until now, in order not to injure the outside ceramic artists or factories, the Parliament had forbidden the sale in public exhibitions or the creation in Paris of a store for the sale of the products. In 1900, on a ministerial order, a successful exception was made to this rule, and at present the factory, overruling all precedents, has on the 1st of May, 1903, opened a store on the Boulevards in Paris.

Moreover, in place of the jealous hiding of the discoveries made in the laboratory, which was characteristic of the administration under the monarchy, the present democratic government is giving out every ten years all the new processes, and in order to efficiently support the efforts of the French ceramic industry, the Minister of Public Instruction has recently annexed to the factory a School of Ceramics, where industrial superintendents are formed, and where after four years devoted both to practice and theory pupils receive the diploma of the School of Sèvres.

If one brings into comparison the situation of the other royal establishments of Europe which have only a nominal protection, like Rosenburg, Meissen, Minton, or a small subsidy, like Berlin (80,000 marks), Copenhagen, St. Petersburg, one will easily understand why with its model organization, its large subsidy which allows the purchase of the creations of great artists, free, unlike other State factories, from all preoccupations of a commercial nature, established formerly in a palace built by Louis XVI on the edge of the woods of St. Cloud and Versailles, later on in a more modern palace due to a caprice of Napoleon III, having the prestige of a State factory and a personnel of eminent artists and artisans unhampered by the cares of material life and with an absolute freedom of presence or absence, one, I say, will easily understand why Sèvres has been this marvelous *ensemble* which for over 100 years has forced a universal admiration

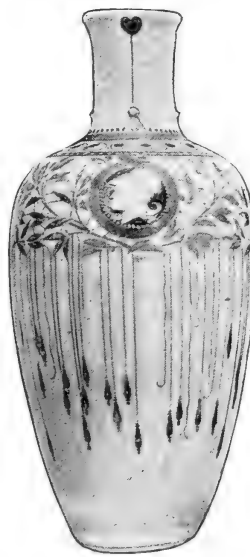
(TO BE CONTINUED)



Pâte tendre—
Vase by Mr. Vignol.



Diana's Game Bag—Hard porcelain, medium
size vase, pâte sur pâte, by Taxile Doat.



Minerva's Lace—Hard porcelain, pâte
sur pâte, by Taxile Doat.



Laurel—Medium size vase,
by Taxile Doat.

CATAWBA TREE

Adelaide A. Robineau

ONE of the showiest and earliest trees to blossom is the Catawba tree. The flowers two or three inches across are in conspicuous spikes resembling in general effect the horse chestnut, but the flower itself is quite different. It is of a creamy white with markings in reddish purple toward the centre, from which two yellow streaks spread on to the lower part of the corolla.

The scale like calyx is green streaked with purple so as to look almost brown. The anthers and pistils are yellow and purple, the odor, similar to that of an orchid. The leaves grow in a whirl about the flower cluster, usually ten to thirteen varying from three inches to sometimes ten inches in length and to seven in width.

The flower itself is very graceful and decorative, and lends itself to almost any style of treatment. The details of flower, pistil, stamens, etc., will suggest many simpler and more conventional designs for smaller pieces.

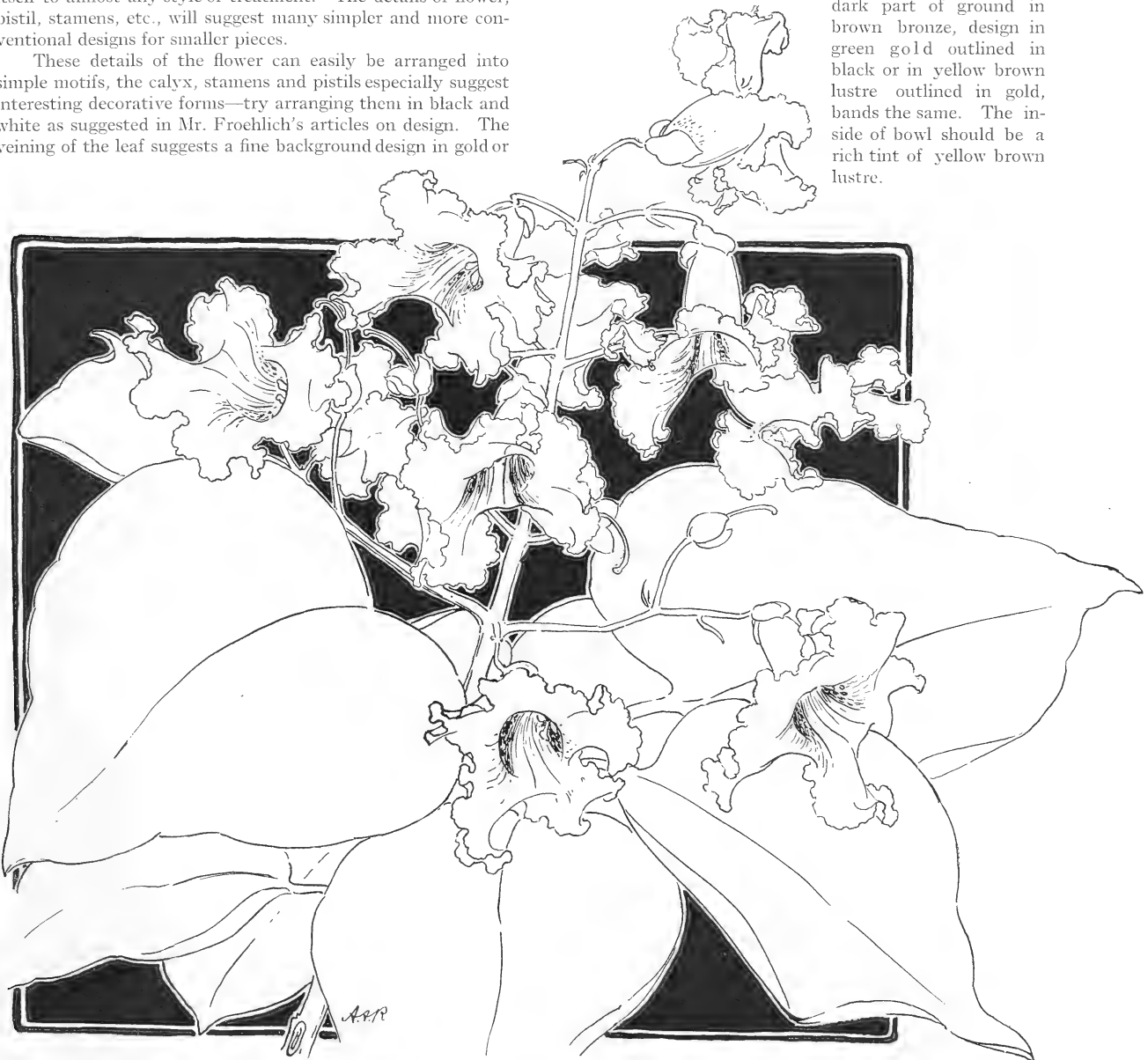
These details of the flower can easily be arranged into simple motifs, the calyx, stamens and pistils especially suggest interesting decorative forms—try arranging them in black and white as suggested in Mr. Froehlich's articles on design. The veining of the leaf suggests a fine background design in gold or

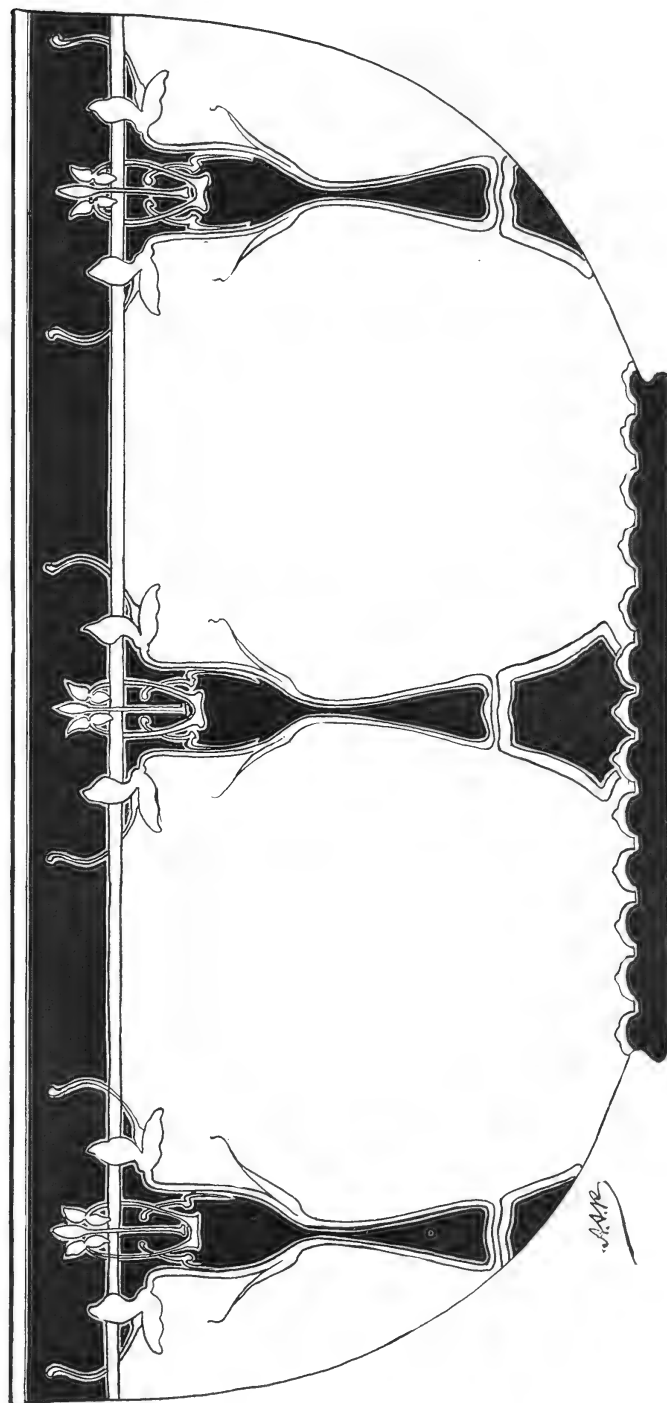
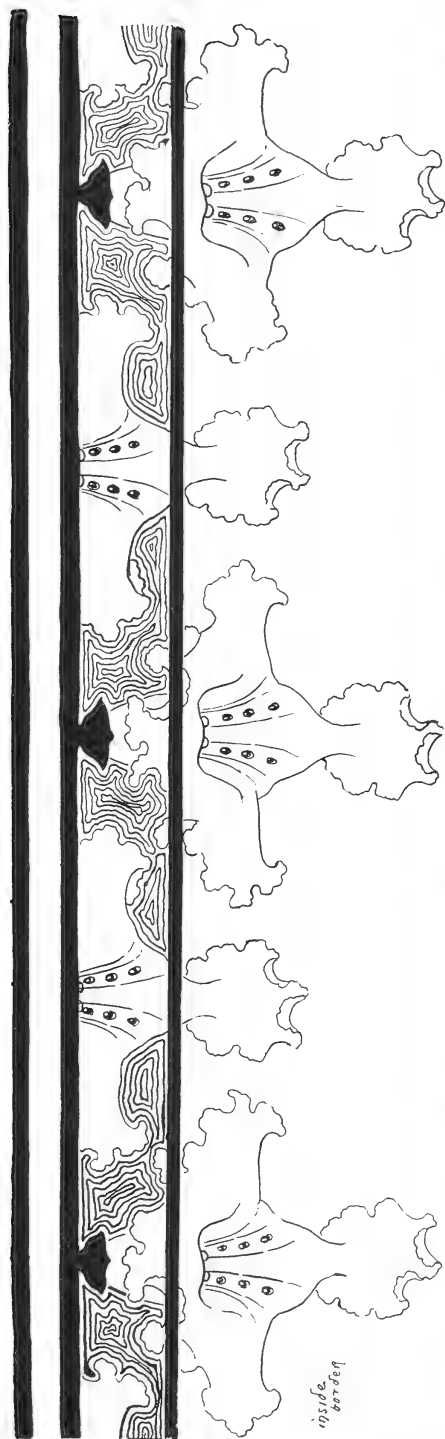
color, as do also the odd markings of the corolla and the peculiar spotting on the branch where the old leaves have fallen off. The centre arrangement of stamens and pistils with the flattened circle about it, shown in the detail drawing, makes an excellent form to use in a simple conventional border in monochrome, and the calyx from every point of view is interesting.

We give here two arrangements for salad bowls.

In using the first border the outside ground of bowl should be left white, bands should be gold outlined in black, light space between upper bands, also flower design, a pale cream tint with green gold outlines and green gold wavy lines in background, two bands behind rows of dots to be deeper yellow spots and marking should be in gold. Inside of bowl may be tinted apple green or cream with band of gold, one-eighth of an inch wide, about a quarter of an inch from rim, outline this band in black.

For the second design tint the outside with a cream ground, dark part of ground in brown bronze, design in green gold outlined in black or in yellow brown lustre outlined in gold, bands the same. The inside of bowl should be a rich tint of yellow brown lustre.



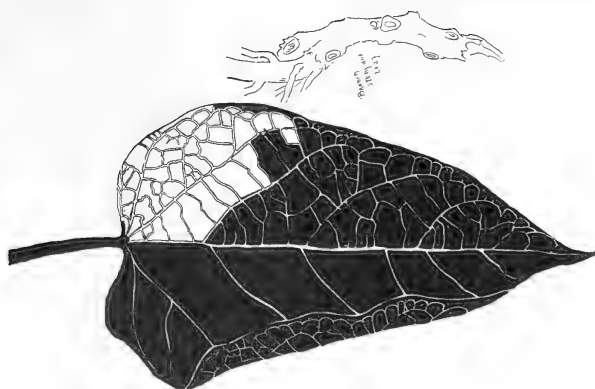


CATAWBA BLOSSOM DESIGN FOR BOWL—ADELAIDE ALSO ROBINEAU

VASE

Frederick H. Rhead

GROUND the sky of the vase with pale blue, and from horizon to the base with a light warm green. Paint the circular masses of the sky in pale Heliotrope and the mass behind the trees in Lemon Yellow. The band round the base of the vase in pale Blue and the ground in wide band in Dark Green,



Leaf and Blossom of Catawba Tree



also paint the trees in dark Green, the footpath in Citron yellow, French Brown and Green, use white in the yellow for the flowers also in the light green for the leaves, the grass blades in a darker green than the ground, the neck and base of the vase to be finished in light purple and greenish greys. The inscription, "The Buttercups, the little children's dower" (Browning), may be used in place of the black band at base.

PRINCIPLES OF DESIGN

(Fourth Article.)

Hugo Froehlich



IN the July number the principle of dark and light, or in other terms, values, was taken up, and that phase known as "two tones" partly considered. Because of the importance of two tones in the crafts, it was thought best to continue a few exercises in that direction. For instance: the Delft, Canton and Dedham wares are illustrations of two tones of blue. A large part of magazine and newspaper work depends on this same principle. Even illustrated books such as the Evening Bell series (see example Fig. 1); Will Bradley's "Beauty and the Beast" (see example Fig. 11); "Child's Garden of Verse," by Robert Louis Stevenson, owe much of their charm to the manner in which black and white have been managed in their illustrations. Often rugs, carpets, wall paper, baskets and printed goods such as calicoes depend on the same principle.

The limitations are severe, but the very simplicity thus forced, tends toward excellence. This is important as the general inclination is to overdo, to combine too many elements in one design. *A sure sign of decadence is over ornamentation.*

It is easy to say keep the work simple, but very difficult to do it. All splendid examples of good art seem to have



Fig - I

required no effort at all. They are so simple that one wonders why they could not be produced at one sitting. This elimination of superfluities requires the hardest kind of work and thought. The apparent absence of effort is a sure sign of its presence.

In the following lessons such problems have been selected as will force the thought in the direction of simplicity. Make simplicity a habit, just as has been suggested to make line quality found in flowers a habit. Both habits can be acquired by systematic exercise.

Problem I—Tile, four inches square, two tones of one color or simply black and white. If two tones of one color are used, mix ivory black with permanent blue in a small saucer. The black is added to modify the harshness of the blue. It need hardly be said that to make a faint wash more water is added to the color, while a strong wash or tone requires very little water.

Make three designs for tiles.

In first tile use facts taken from nature forms (see June number KERAMIC STUDIO, pages 41 and 40, Prob. I), or use a conventional treatment as in Fig. III.

Second tile, find some historic style such as Greek, Persian, Romanesque, or any of the others will do. Adapt them to the conditions of a tile. Write under the design the name of the style used, as in Fig. IV.



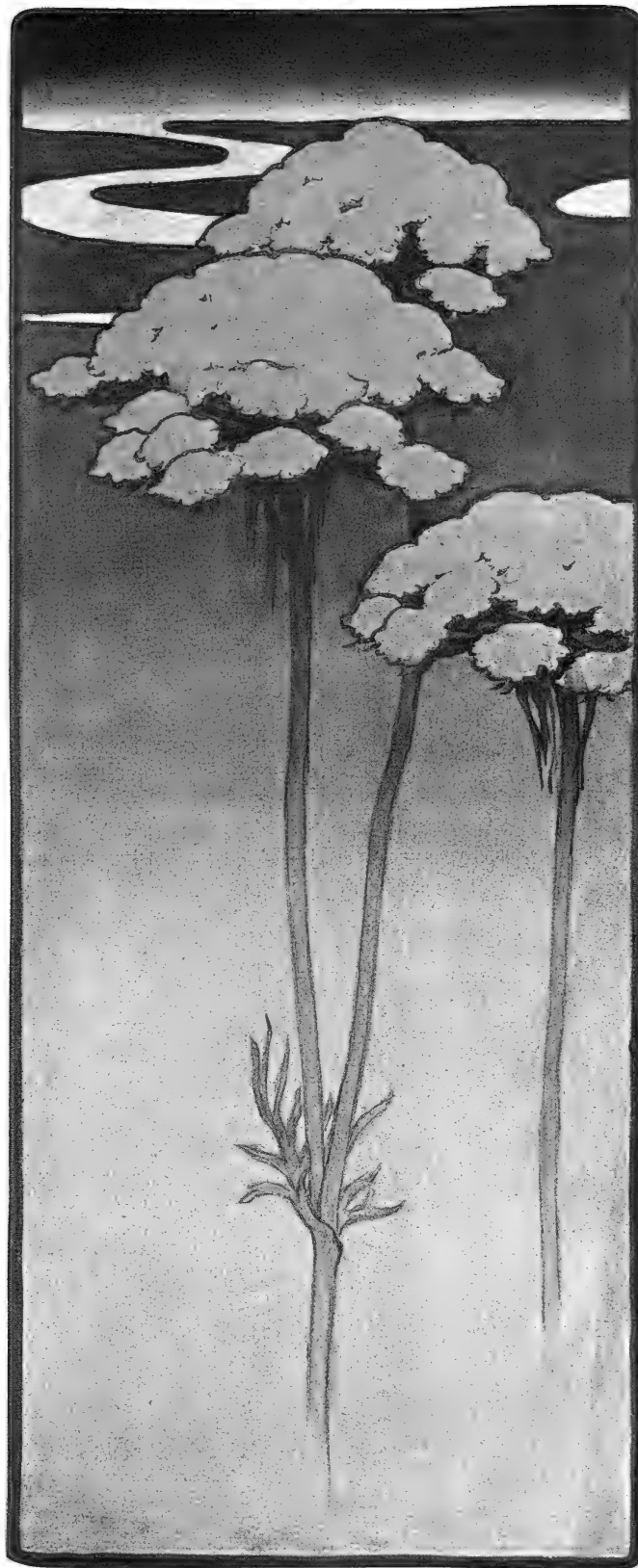
Fig II

Third tile to be based on straight line motive, Fig. v. Note that the principle in these three examples is that of two sided symmetry in Fig. III, and four sided symmetry in Figs. IV and V.

In the first, our own inventions based on nature forms are used. In the second, the motive has been borrowed from some style and adapted to a tile. This is largely the method adopted by designers having little inventive powers. It is introduced here that we may learn something of the beauty of historic styles and at the same time see that they are founded on the principles of composition which we are considering.

The third tile or straight line is purely imaginative. It is an exercise in proportion and direction of areas. In these designs we have employed the three sources from which motives originate, namely: nature, historic ornament and imagination.

In planning the design, it is the breaking up of some given bounded shape like a square or rectangle that we seek, by means of straight or curved lines. And in this process we must think of such areas and such lines as are beautiful in themselves and related to their neighbors. This being related to their neighbors is a perplexing question. In Fig. IV tile based on the Byzantine the lines marked xx, oo, ss, have consistency,



AUGUST, 1903
SUPPLEMENT TO
KERAMIC STUDIO

WILD CARROT—M. M. MASON
PRIZE DESIGN

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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SYRACUSE, N. Y.



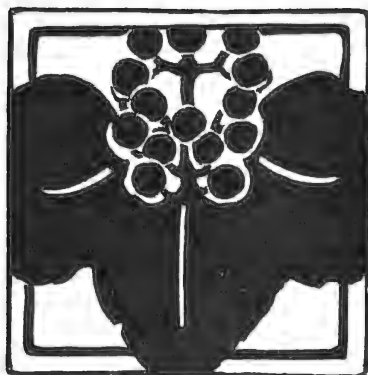


Fig III



Fig IV Byzantine.

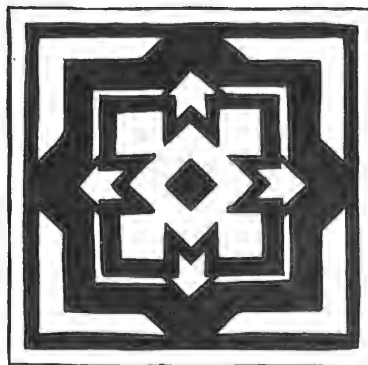


Fig V

viz: if the lines or edges were extended they would drop into the direction of the other marked with same letter, thereby producing harmony of movement.

This movement or consistency is of utmost importance in every work of art and is readily understood by the successful artist and designer, but to the student it is a matter of searching. Let us test its existence by considering Millet's "Potato Planting" Fig. VI. The main shapes, the man and woman are finely placed on the canvas. The man just a little to the left of the center, the woman much farther to the right. The action of the two unites in the process of planting. This point is again near the center of the canvas. Then see how the main line of the picture circles about this point, beginning at the heel of the man's left foot, passing over his back and hat across the intervening space to the woman's head, down her figure and ending where her left foot touches the ground. How big and sweeping

the movement is. Throughout its length it expresses truth of form but ignores all detail. It models the forms stronger and more truthful than a camera could do it, because in its severity it can consider only the essentials that make a figure. The shape of the tree repeats with slight variation this movement. The horizontal lines of the distance and foreground are a play on the horizontal edge of the canvas, while the vertical movement is expressed in the lines of the man's legs, tree trunk and edges of woman's dress. This delightful play of one line into some answering line can hardly be expressed in words any more than a harmony of sounds can be described. It must be felt. Once the judgment can discern this related quality, it gives the mind increased power of enjoyment. In every design look to it that the parts seem to flow one into the other and that the structural lines of the object control to some extent this action. Wherever a small projection can be lopped off so as to make the



FIG. VI—MILLET'S "POTATO PLANTING."

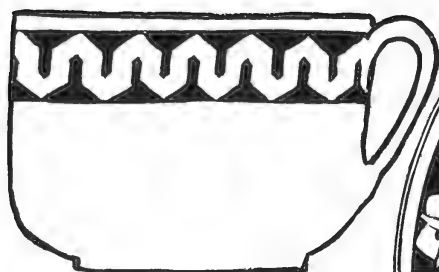


Fig. VII



Fig. VIII



Fig. IX

movement simpler and larger, do so, providing its elimination does not violate truthful drawing.

In the tiles lay a faint wash of permanent blue and ivory black over entire four inch square. Wait until dry, then with much stronger color paint in some of the shapes, striving for a balance between the quantities of light and dark shapes. In this matter of balance no hard and fast rule can be made. In a general way it might be stated that one must not dominate the other to any great extent. There ought to be main masses of light and main masses of dark, secondary masses of both.

Problem II. Cup and Saucer—In this as in the preceding, use two tones either solid black on white or a dark grey blue on a light grey blue. Keep the cup and saucer shape very simple. Do not break any structural lines. So often the rim of a saucer or plate is one string of wriggles. The same is true of the handles.

First cup—Arrange a border in straight line motive, Fig. VII. This comes under linear repetition. Study width of border so as to make good proportion with width of undecorated part. Do not use motive too large as that would overbalance size of cup. On the other hand guard against the use of too many small ones.

Second cup or saucer—Use some motive from nature as Fig. VIII.

Third cup or saucer—Employ some historic style as in Fig. IX, Gothic.

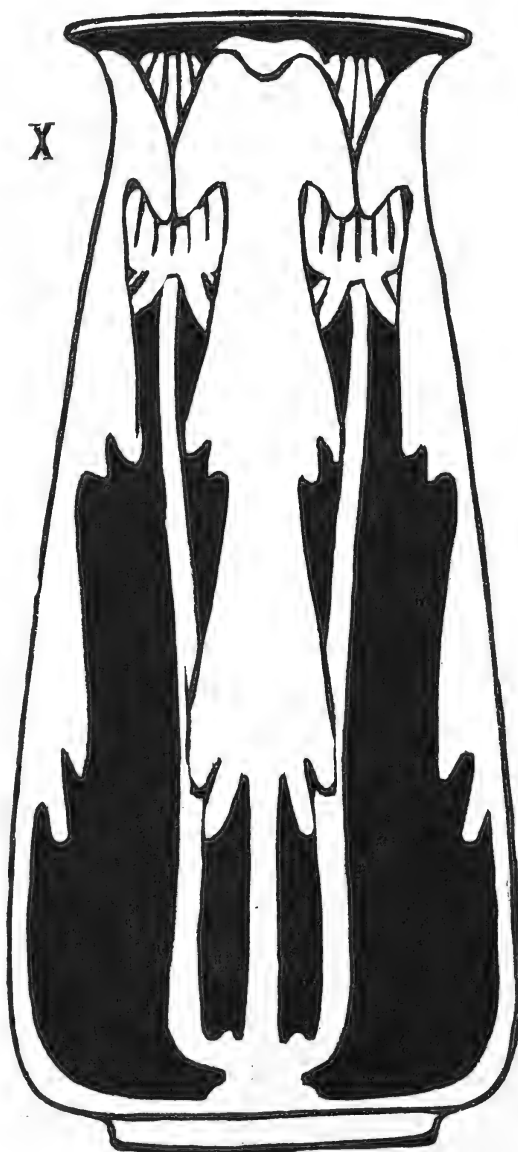
Problem III. Plan some vase form. Let its general structure be vertical like Fig. X, viz: the long vertical lines ought to overbalance the short curves and horizontal lines so as to produce tallness. A reversal of this arrangement gives the effect of the low flat vase form.

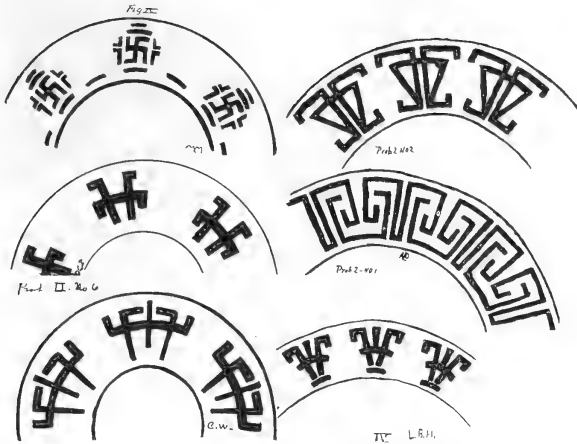
In the decoration use the conventionalized or realistic flower forms but in both cases only the decorative elements of the plant are to be considered. Avoid picture painting. Repeat the lines of the vase with some variation in the design. Always set up a relation of this kind between the structural and the design elements. Paint in either the design or the background in black and white or two tones of blue.

Do not forget the lesson side, which is to strengthen the judgment in determining just how much light and dark is to be used and the harmony of the edges of areas. Every area must be beautiful in itself and its beauty must be in keeping with that of its neighbors.

THE CLASS ROOM

All subscribers wishing to follow the course of lessons on design by Mr. Froehlich, may submit their best three solutions of each problem to this depart-





ment. They will be criticised in the magazine so as to afford the mutual help or class room criticism. The work of one lesson will be criticised in the following number of *KERAMIC STUDIO*. We can not return work sent for criticism.

After working out solutions and marking them from 1 to 6 in order of *merit* not of *making*, select the best three of each problem and make copies, using brush and India ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach KERAMIC STUDIO before 8th of month or no criticism will be given. Keep originals of work sent, to refer to in case it is not put on the “black-board” of the Class-Room.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

A. L. D.—Problem I. These solutions have the effect of not having been sufficiently considered, especially the background shapes. The shapes of background spaces should be such that if the color scheme should be reversed the design would be fully as good, also it should be considered in a tile that when four tiles are placed together the background space where the four corners come together should be quite as fine in shape as the design proper. The design should occupy the corners sufficiently to give a finished effect.

Prob. II. Border designs. Figs. 1, 2 and 16 are interesting, the opposite movement of the small squares in Fig. 1 is somewhat distracting, acute angle in Fig. 1 should be relieved by cutting off the corners. In Fig. 2 the line should be wider. The spacing is better in Fig. 1 than in Fig. 2.

E. P. H. Problem I. Sol. 1 and 2 very good in dark and light and invention, No. 1 needs a heavier line around the tile to hold the heavy central form, a dark square between the two turned in ends would help the design. 3 and 4 have too much dark and the thought is common-place.

Prob. II.—Borders. Figs. 4 and 15 are excellent. The other border is weak and not well thought out, neither is the plate border which has little interest.

Prob. III. None of the solutions are good in division or areas, of dark and light, the design is placed too much in one spot, the center of the rectangle.

C. W.—Problem I. These solutions are good in the distribution of dark and light but defective in invention, your last lesson's work was much more imaginative.

Prob. II. Borders 20 and 26 are also good in distribution of dark and light and in spacing, 25 needs a little wider spacing. Plate border design is too wide for plate but is well spaced, the center line of ornament is a little too narrow.

Prob. III. Solutions are good in massing of dark and light but drawing is not interestingly made. The double line about flowers is not appropriate for a naturalistic arrangement.

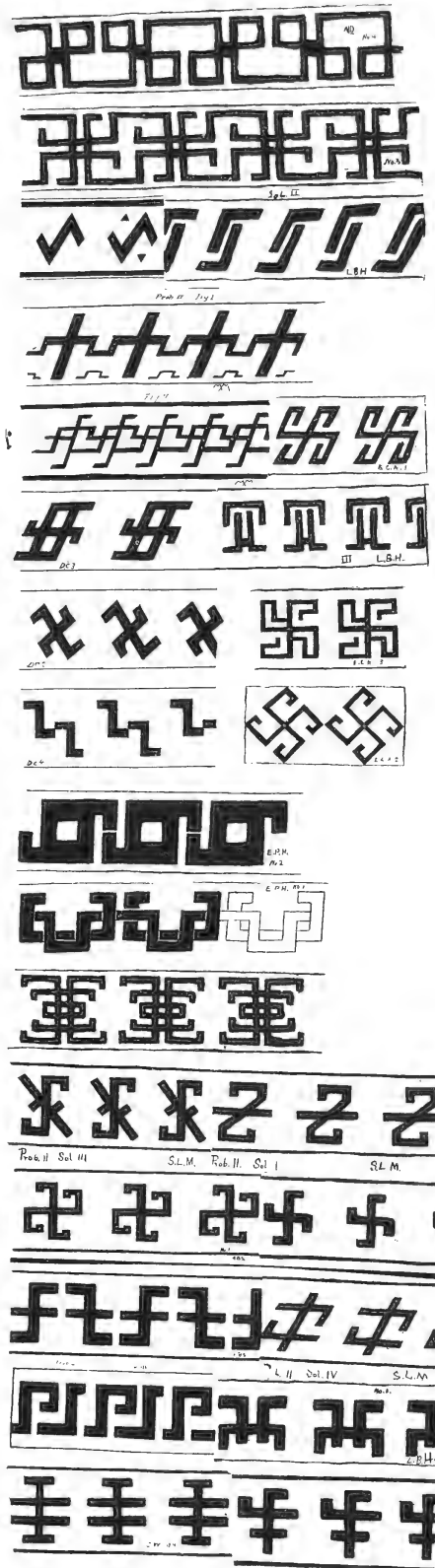
H. B.—Problem I. Tile good as far as it goes, too much light space, needs something to break up large surrounding space.

Prob. II. Fig. 3. This is a fine border in every way—good especially for basketry.

Prob. III. Sol. 1. Too much dark area. Sol. 2. Cuts the area into two diagonal masses of dark and light—it is not a composition.

M. M.—Prob. I. Sol. 1. Good. The proportion of black might be a little greater; your second solution is good in proportions of black and white but invention not so good, the third has too much movement, not enough dark to balance light and the acute angles at corners unpleasant, these should be cut off; too many forms used.

Prob. II. Plate border is well spaced and interesting. The other plate



border is not good in invention. Border No. 5 is best in dark and light, but small form below not heavy enough to hold the design together. No. 6 is interesting; too intricate, it would be better if the line were about twice as heavy.

Prob. III. Both solutions are good every way. The Hollyhock is especially fine.

E. C. A.—Problem I. Solutions all good—judgment correct as to comparative merit of designs.

Prob. II. Fig. 7, 11, 13 all good in design and spacing, proportion of dark should be slightly increased by widening the line. No. 11 is best; 13 would be improved with a small dark form in triangular space. Plate design not

good; too much motion, too large and not well spaced.

Prob. III. Solutions are all too spotty and proportion of dark too great.

L. B. H.—Prob. I. Solutions all cut up into too small areas like a checker board, impossible to take in the idea intended at a glance.

Prob. II. Borders. Figs. 4, 9 and 24 are good in every way. Plate border a little heavy for plate ornament, would be better if base was not quite so much narrower than top.

Prob. III. Solutions are not well understood, they are not compositions in any sense.

D. C.—Prob. I. Solutions 3 and 4 are good in dark and light. In No. 4 the whirling motion is unpleasant as it is not appropriate for a square, the



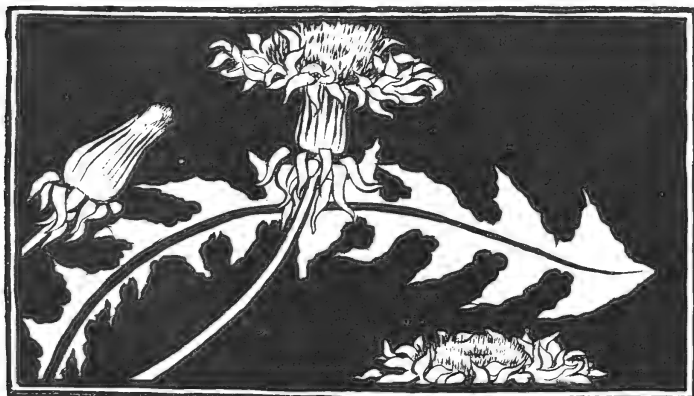
Helianthus III. No. I.



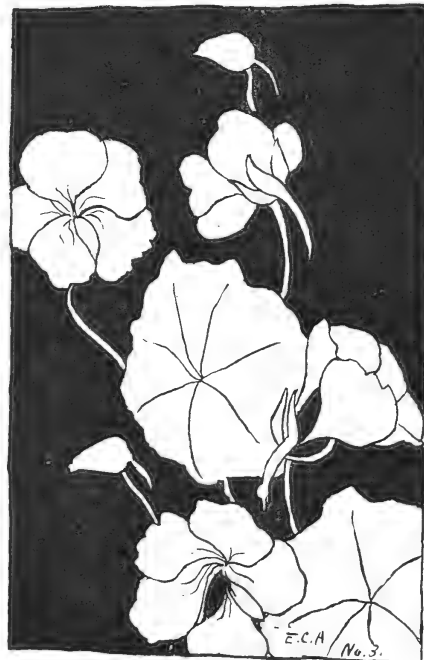
Fig I M.C.



Prob III Sol. I S.L.M.



Prob. III Sol. III S.L.M.



balance of dark and light is not so good in the other solutions, neither is invention.

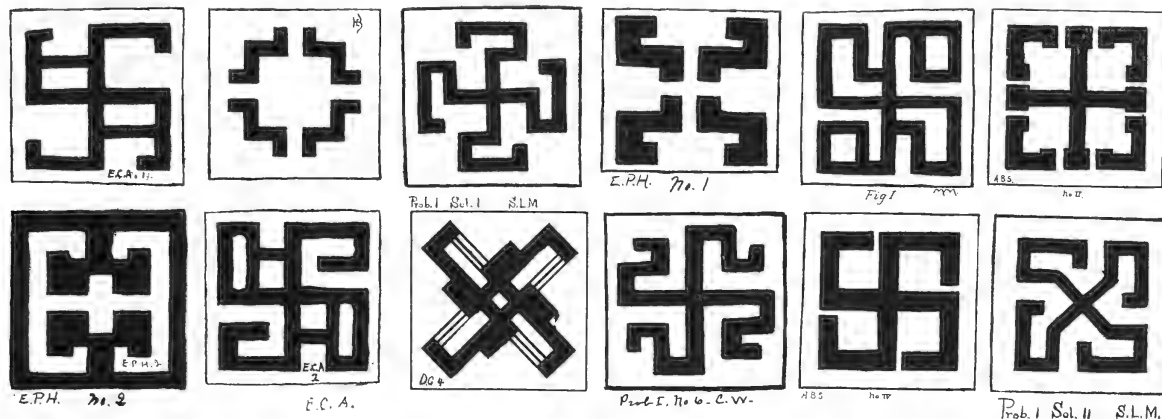
Prob. II. Borders 8, 10 and 12 are good in every way. Plate border ornament too large for plate but well spaced.

Prob. III. Solutions are all too spotty; too many small and similar forms, design looks thin and scattered.

S. L. M.—Prob. I. Solutions all good in distribution of dark and light. Solution 1 would be improved by a square in the corners. Other solutions are not so good in invention.

Prob. II. Borders. Figs. 17, 18, and 22 are good in dark and light but diagonal movement too pronounced; the cross bar gives an unpleasant feeling. Plate border has too many bars going in different directions.

Prob. III. Are all interesting and good in dark and light. Solution 1 is especially good.



SUMMER SCHOOLS

The summer schools are all in full swing now and well attended, it is worthy of note that in every case, one or more of the crafts has been added to the regular work. The demand for knowledge of the useful and beautiful is growing apace, a manual training in some art or craft is beginning to be felt universally as a necessity in a sane and healthy education; when our growing generation of young people have been trained in this atmosphere we may look for some remarkable results and a sweeter, healthier atmosphere in our homes and abroad. At least, they will create such a demand for good art and decoration that our homes and shops will no longer be flooded with the atrocities of bad taste seen everywhere now. The hope of art for the future is the education of the growing generation beginning in the kindergarten.

Try and live by the advice of Wm. Morris, who says: "Have nothing in your homes or about you that you do not know to be useful or believe to be beautiful."

NATIONAL LEAGUE OF MINERAL PAINTERS

THE League reports that application for space in the St. Louis Exposition has been made, and the promise received that it shall have careful consideration.

From Augusta, Maine, comes the word that the club enjoyed the League exhibition, and intends to plan for the one next year.

The Providence Ceramic Club held its Annual meeting on June 4. The following officers were elected: Pres. Miss Emily Hall; Vice-Pres. Mrs. LaFayette Rogers; Sec. Miss Susan R. Rawson; Treas. Miss Emily H. Crouch; Following the business meeting was the annual supper, at which time the yearly exchange of plates occurred. The plates are of uniform size and

Sol. 3 would be better if leaf did not cross flower at such a pronounced angle.

A. B. S.—Prob. I. The proportion of black and white in these solutions is very good, they are a little lacking in invention. In No. 1 the effect is too spotty and unfinished, there seems to be no continuity, nothing to hold the design together. In No. 3 the black is centered too much it should fill space more fully.

Prob. II. The plate border has too diagonal a movement, leaving an impression of unrest, the connecting lines are too slight to hold the design.

The borders—Figs. 19, 21 and 23 are good in balance of dark and light, and much better in invention than the tiles.

Prob. III. These solutions are all good in dark and light arrangement and your judgment in regard to order of excellence is correct. In No 2 the lines leading out of the rectangle are too marked. In 3 and 4 the round leaf in the corner is spotty in effect, it should be cut by the rectangle.

shape, the same being used each year, and decorated by the members. This "Annual Swap" is a most interesting feature and the members hope to continue it indefinitely.

The Providence Club made every effort to make the League Exhibition a success, and had a very large attendance.

The vases they thought did not show as good work as those of last year, but the plates were very interesting, and the bowls they were very much pleased with, both in shape and decoration.

We had hoped to present something from all the clubs which have received the exhibition but up to this writing, only two have been heard from. Let this be a gentle reminder to the delinquents that we should all like to know the impression that is being made.

I. A. JOHNSON,
President.

Outline for Study Course for the National League of Mineral Painters for 1903-1904

COMPARATIVE.

Jar, No. 505, Ceramic Art Co.

Pitcher, selected from League competition of last year.
9½ or 10-inch plate, either rim or coupe.

EDUCATIONAL.

Outline for cup and saucer.

Jar, with or without cover; to be modeled, thrown or cast, with or without glaze.

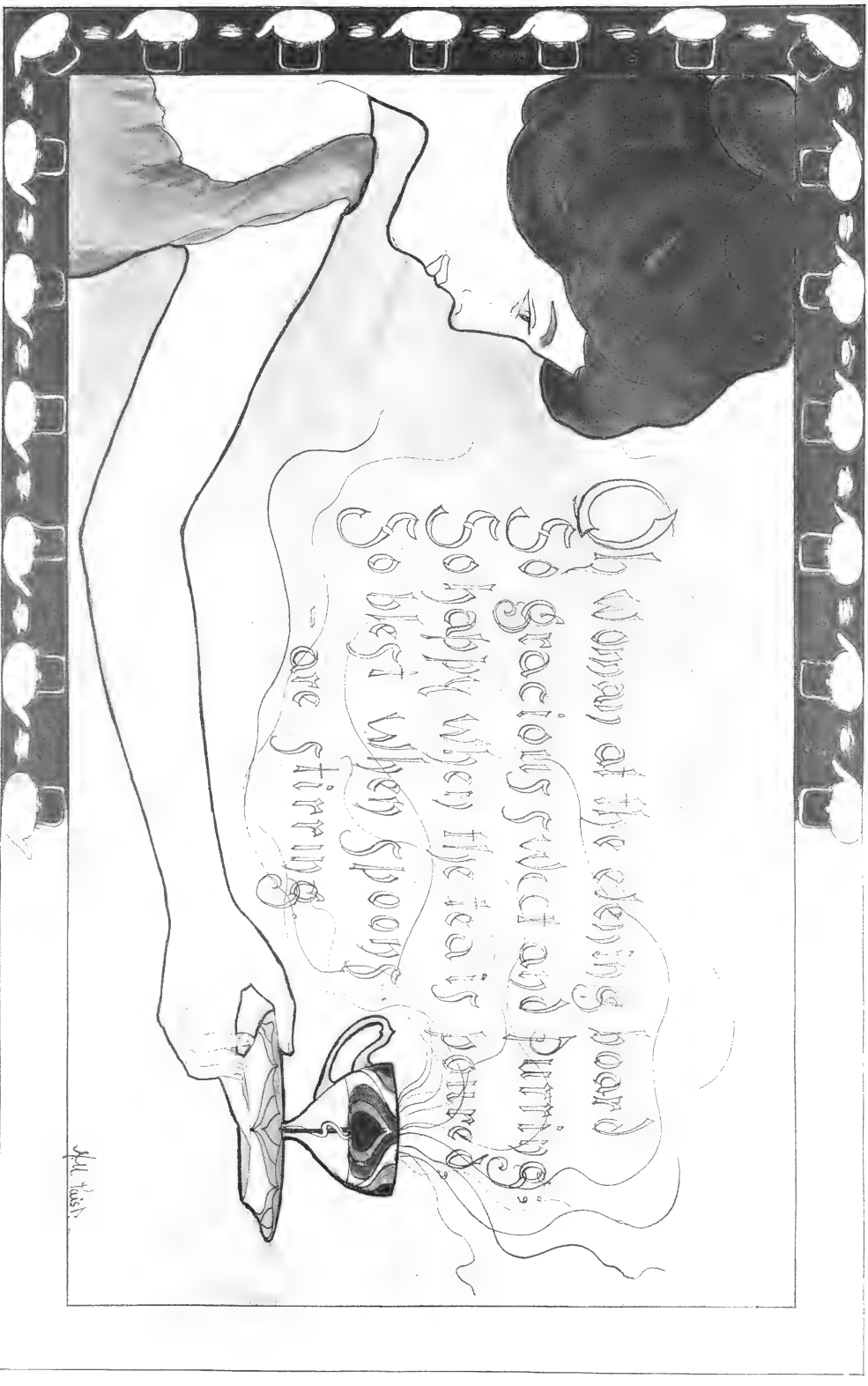
Design for 8-inch Tile, in black and white, water color, or the tile itself.

MARY CHASE PERRY,
Chairman Educational Com.



DESIGN FOR BOWL OR PLAQUE—LUCIA A. SOULE

To be carried out in two shades of blue grey on white or two shades of grey green on cream ground.



THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

SIMPLE FURNITURE

ITS STRUCTURE IN RELATION TO USE AND BEAUTY

(Second Paper)

Elisabeth Saugstad



ALMOST any kind of wood may be used in making furniture, and there are certain properties shared, in a greater or lesser degree, by all varieties, but each has its own individuality, which makes it particularly suited to certain styles and uses. The more sensitive the craftsman is to this, the more sympathetically and intelligently he works along these lines, the greater will be his success, both usefully and artistically.

I need touch here only on those woods which from their general availability and characteristics are best adapted to the style of furniture under consideration. Of these the oak, "Sole king of forests all," as Spencer calls it, comes easily first, it is so strong, durable and beautiful, quite fine enough for princely halls and noble dining rooms, but lending itself with equal appropriateness to the simplest effects. But it must always be treated with breadth, dignity and directness.

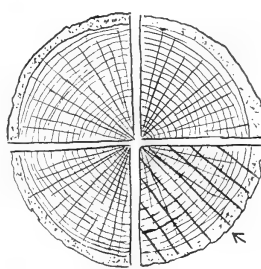
It cannot be surpassed for furniture for the hall, library, dining and living rooms. It is one of the easiest woods to procure; it is not expensive, nor is it especially difficult to work, though there are degrees of hardness. White oak is the kind most commonly used and it comes in all dimensions, either plain or quartered. Quartered oak, with its beautiful markings, is not, as some suppose, a different kind, but any oak cut as nearly as possible in the plane of the silver grain or medullary rays. These radiate from the center and the diagram, Ill. I, shows the manner of cutting to get the greatest amount of figured wood with the least waste.

Ash is a very useful and satisfactory wood for the beginner. It is lighter in weight and easier to work than oak, but it is strong and durable. It has an open, flowing grain, boldly marked in a strong, free way, and it demands broad and simple treatment. For the piazza, the "den" and the summer cottage

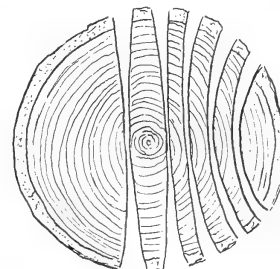
where furniture of the simplest kind, strong, yet not heavy, is desirable, it is better than oak. It is cheaper, also, and easy to get in most places.

Mahogany is a very beautiful wood which may be used for very simple furniture, if the simplicity be that of refinement and artistic reserve, and the workmanship perfect. Its fine texture and rich deep orange and wine tones, undershot with subtle golden lights, would make anything primitive or crude in treatment seem as incongruous as a silken brocade used as a working gown.

The finest and best comes from the West Indies and is called Spanish and Cuban, but is very heavy and hard to



I
How oak is quartered.



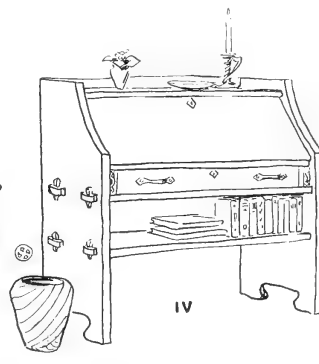
II
Showing the action of wood in shrinking.

work. The highly figured kinds are always used as veneers. The kinds most used in cabinet work are Mexican and Honduras. These are not as heavy and dark as the West Indian, but are quite heavy enough for strength and durability, and are among the most agreeable woods to work, being clean and free from knots. It is not as expensive as many suppose, and it is sometimes possible to get boards in short lengths at little more than the price of quartered oak.

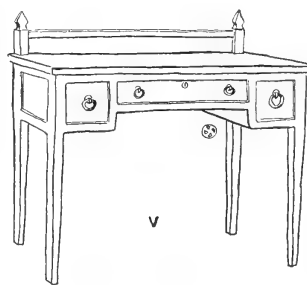
Walnut, at one time so indiscriminately used and abused, is really a beautiful wood when it is well treated, being strong and fine grained, and makes furniture of sober richness and dignity, particularly suited to dining rooms and libraries of that character.



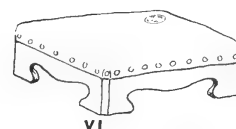
III
A design best developed in oak or walnut. It may be quite plain or carved simply.



IV
A design suited to ash or plain oak.



V
A design particularly suited to mahogany. Brass fittings.



VI
A design which may be used for any wood from pine to mahogany, with any sort of stout covering, from denim to Spanish leather.

It should have broad, but conservative treatment, and any thing primitive in design or construction, is as little pleasing as in mahogany, though it is suited to a heavier, simpler style than the latter. It is a wood which looks very well carved, not, however, the bulbous kind which was so much used on it, and which not only looks but usually is stuck on. Its use on any kind of furniture shows lack not only of good taste, but good sense. Walnut is now rather scarce and costs as much as good mahogany, but we have always been able to get it in small quantities.

These are the four woods Mr. Saugstad and I use most often and like best, and they have a wide range of applications; but there are of course many others that the craftsman may use, as red and white birch, maple, (not the birdseye, which is always a veneer), cherry, sycamore, hard pine and whitewood. The two last, stained or painted, make excellent light weight furniture for the porch and summer cottage, and are cheap and available almost anywhere. They cut clean and are easy to work, so they are very good woods for the beginner to try his "prentice hand" on.

But though these woods vary so much in their color, grain and uses, there are, as I have said, certain things which they have in common, to a greater or lesser degree. The most trying of these properties is shrinkage and expansion as the moisture in the wood is dried out or as it absorbs more from the

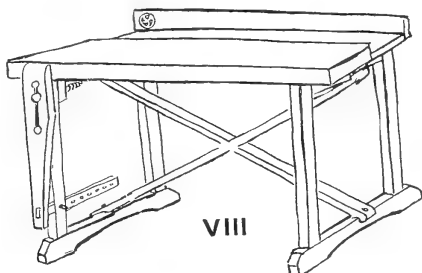
The longer it can be kept at about the temperature to which it is likely to be subjected, the better.

Over drying at a high temperature makes it more apt to absorb moisture. Too rapid drying is likely to cause it to split at the ends, where the pores being more open the drying is, consequently, quicker. This can be prevented by painting or shellacking the ends, which is a wise precaution in any case.

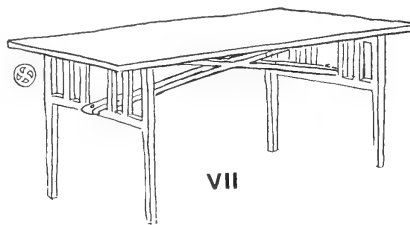
The principle which wood follows in drying is shrinking along the line of the circumference, as the heartwood is closer fibred and more solid than the sapwood. The diagram, Ill. 2, explains the action and it is well to fix the principle firmly in mind, and remember that the heart side of boards will dry convex and the sap side concave.

In buying wood the best way is to go to a reputable dealer, tell him just what kind of wood is wanted, for what purpose and trust to his judgment and honesty; for it requires long experience to choose lumber in its rough, begrimed state in a yard. Confidence, courtesy and interest in the subject will, nine times out of ten, not only insure a much better selection than the amateur is able to make for himself, but will often draw out much information of value.

It was a distinct shock and disappointment to me when I had to give up my cherished illusion, shared by most beginners, that with wits and patience to guide them, the old family saw and plane, rusting in the woodshed, were the only equipment



Well braced and convenient work bench of pine, with the 2 in. top preferably of oak or maple. Wooden vise, which is less expensive, but not as rigid, durable and quick acting as one of iron. Bits of rubber under feet to keep from slipping.



Low sewing or work table, best made of some light weight wood, as pine or white wood.

atmosphere. The first causes splitting, unsightly cracks and warping, and the second is what makes doors and drawers stick and panels split and bulge and open the joints in the frame work when the weather is damp.

It is impossible to be too positive on the necessity of well seasoned wood, and if the craftsman can only be convinced of that before it is borne in upon him by hard experience, it will save him much discouragement and mortification.

The lumber man will probably say that the wood is well seasoned, but what will do for ordinary building purposes will not do for furniture.

If there is an available dry kiln it is well to rough out the wood to the general dimensions of the piece contemplated and put it in for from one to three weeks at a temperature of from 80 to 100°. If this is not possible, as is often the case, the next best thing is to put the pieces on the cross rafters in the attic, if it is summer, make a draught through, if possible, and leave them there for not less than a month or six weeks. In the winter they can be put on a rack over, or near, the furnace or stove, being careful, of course, that they are not so near as to be in danger of charring or catching fire.

This seems a great deal of trouble, perhaps, but it is a short and easy cut compared to the way the old Mission Fathers turned and seasoned their wood for years. It is not as good a way, but it is the best we can do under most circumstances.

necessary to the determined and enthusiastic craftsman. Good tools, well kept, are necessary for good work. It is very poor economy to get an inferior grade.

It would be impossible to give an exact list of necessary tools without knowing the extent of each craftsman's ambition; but with those in the following list it is possible to construct any piece of furniture illustrated in these articles. The cost will be between \$10 and \$15:

Cross cut, Rip and Back saws; Jack and Block planes, necessary; Smooth and Fore planes, desirable; 5 Chisels, from $\frac{1}{4}$ to $1\frac{1}{2}$ inch; Brace and 3 bits from $\frac{1}{4}$ to $\frac{1}{2}$ inch; Mallet; Hammer; Ruler; Try-square; Bevel; Marking gauge; Gimlet; Compass and Brad awl, useful; a Plow is necessary in panelled work; Clamps.

(TO BE CONTINUED)

EXHIBIT AT PRATT INSTITUTE

THE annual exhibition of the students' work at Pratt Institute, Brooklyn, took place the 5th, 6th and 7th of June. It was well attended and the work was the best that has ever been shown.

The Art Metal room was quite a point of interest and many good examples of metal chasing, engraving and enamelling were exhibited.

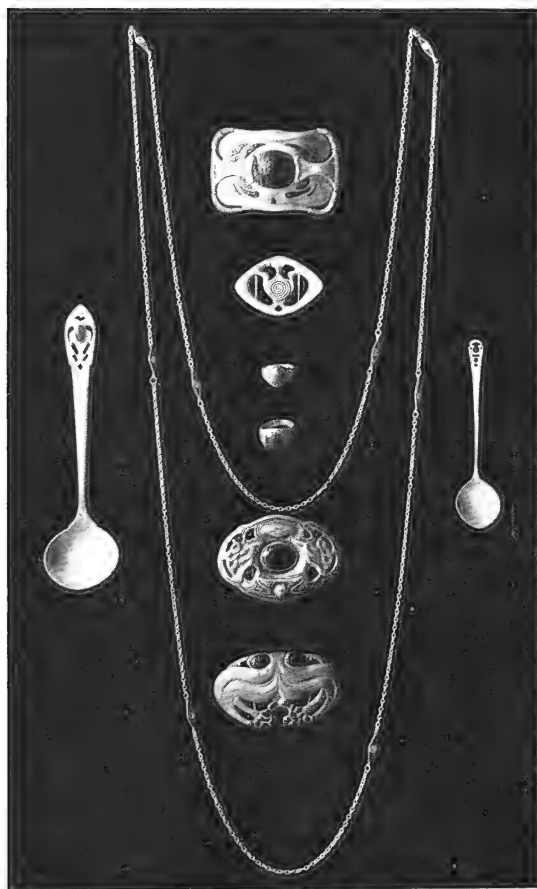
Enamelling on metal has only been taken up by the class

since January, and the students have been experimenting for themselves with great success.

Mrs. Hugo Froehlich exhibited a dainty silver chain with the links enamelled, some silver buckles and very chaste spoons. The handle of the large one was pierced and set with a Mexican opal; the smaller enamelled in transparent enamel.

Mrs. Helen Ward showed some silver photo frames of clever workmanship and very beautifully finished. She also had an exquisite brooch of enamelled gold set in a frame of twisted wire.

Of the several necklaces with pendants made by Miss E. P. Day the gold set with amethysts and pearls was the most admired; she also had two cleverly wrought gold and silver rings.



Mrs. H. Froehlich.

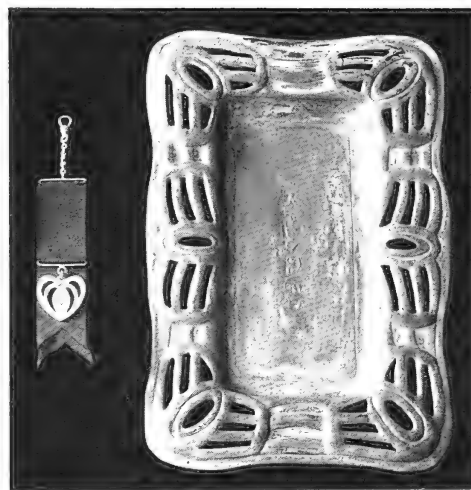
Mrs. K. Wright showed an interesting copper tray with design in open work, and a silver and enamel fob, which was pierced and very pleasing.

Miss Pearson's silver clock clasp was unique. It was made of coiled wire with silver backing and set with unpolished brown stones. Her long chains with enamelled links and the enamelled pendant and chain showed skill and fine finish.

Miss E. Vail showed some hand made spoons of old design, reminding us of our grandmother's time; and an oxidized silver necklace and pendant set with malachite, all very pleasing.

Miss Lambert had a pierced silver bowl which was very much appreciated.

Mr. R. Moulton's gravy dish and spoon were very harmon-



Mrs. K. Wright.

ious in design, and showed artistic feeling.

Miss Peacock's exhibit consisted of a belt pin in the form of a scarab in green and blue enamel on silver; some quaint silver pins set with Mexican opals, a low silver dish repoussé in simple design and a pierced silver tea strainer.

Mr. H. Kuss had an interesting and instructive exhibit of the process of dye setting.



Middle Pendant by Miss E. Vail, the others by Miss E. P. Day.

PYROGRAPHY TREATMENT FOR TRAY (Page 93)

Katherine Livermore

THE lettering should be done with the finest etching point in the daintiest manner possible, also the lines of steam which emanate from the cup.

Use an ordinary curved point for the rest of the work; making the hair in bold strong lines very close together to make a solid mass; the gown should be shaded with the flat side of the point, keeping it in a medium tone. In working up any design always strive to obtain three tones,—dark, medium, light. Carry this same idea out in the border, making the background dark, leave in the kettles the natural wood and shade the cups very delicately in the finest lines with the etching point.

ANSWERS TO INQUIRIES

A. L. F.—Asphaltum varnish comes in tubes and cans of all sizes. It can be bought of any paint shop.

M. P.—Probably you bought C. sulphuric acid, which means commercial and is not right. Always ask for C. P., this refers to all acids, and means chemical pure.

R. T.—Sphinx paste is better than any other for leather work. It can be bought at the Arabol Co., William St., New York.

H. P.—Devon's oil malachite green will give a delightful finish to the wood part of your sence. Rub in a very little at a time until you get the desired effect.

To finish wood in the natural state, take half spirits of turpentine and half beeswax by weight. Put these together in a can and melt by putting the can in another one holding water. Keep water boiling, and stir the mixture constantly, until it is thoroughly blended, and of the consistency of thick cream.

CLUB NOTE

The annual meeting of the Detroit Ceramic Art Club was held April 24th in Miss Mary MacMaster's studio, Whitney Block, the following officers being elected: President, Miss Mary MacMaster; first Vice-President, Mrs. Caroline T. Owen; second Vice-president, Miss Goodall; Recording Secretary, Miss Miriam Candler; Corresponding Secretary, Miss Edna Hibbard; Treasurer, Miss Ida Parkinson. Miss Donaldson, Miss Goodall, and Miss White were made members of the Advisory Board.

C. EDNA HIBBARD, Cor. Secretary.

ANSWERS TO CORRESPONDENTS

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

E. C.—We have never heard of outlining in black paste—we think you must mean black paint, which is the regular method of outlining. To do this, use German outlining black in powder, mix to the consistency of tube colors with a medium composed of 6 drops copaiba to one of oil of cloves, thin with rectified spirits of turpentine so that the color will flow easily from the brush but thick enough to make a good black line. When dry, go over line again to be sure it is black enough. If you wish a raised black line add 1-5 Dresden Aufsetzweiss in tubes and work the same way as paste for raised gold, be sure and make the line of even width and blackness. You may see examples of the flat outlining in every studio.

D. M. A.—The best medium to use with powder colors to keep them open until painting is finished and colors well blended, is a mixture of one drop of oil of cloves to six of copaiba. With tube colors, oil of lavender or oil of cloves can be used to keep the color open.

C. S.—Mix your powder color to the consistency of tube colors with the medium given for D. M. A., thin with rectified spirits of turpentine, not as thin as for painting if a dark color is required, and use the rubber stamp as on an ink pad, first smoothing the color on the palette so that the stamp will not sink too deeply. For tube colors or gold add turpentine only.

Mrs. W. W. S.—The iron colors, deep red brown and carnation especially, have an unreliable way of firing, often one tube of color will rub off while another will fire well. We should use 1-3 flux and no ivory yellow and fire reasonably hard. If it continues to rub off, throw away the tube and try another; ivory or any yellow added to iron reds is liable to destroy the red unless very judiciously used, a very small quantity is generally sufficient.

W. T.—The best tinting can be made by using 1-3 as much flux as color, adding as much fat oil of turpentine as color and flux combined, thin with oil

of turpentine until it is no longer 'fatty.' We do not care for any ready prepared tinting oils. The preparation of grounding oil is a secret of the manufacturers, also the oils used in the preparation of the Dresden tube colors. For tinting, in case you use powder colors, mix them first with medium six drops of copaiba to one of clove oil to the consistency of tube colors, then use the fat oil and lavender.

G. S. A.—We do not know of any better medium than the one of which we gave you the formula. If you wish to compose a medium of any or all the ingredients you mention you might experiment until you find the composition you wish. The fat oil and copaiba are used to hold the colors together so that they will not be grainy, it is not usual to have both in the same mixture, the copaiba perhaps keeps open a little longer and is not quite so smooth as the fat oil. Oil of tar keeps open longer still and has only a little of the quality of keeping color smooth. Oil of lavender is added to keep color open only and oil of cloves keeps color open longer still, usually only one of each kind of oil is used in combination, that is, fat oil and lavender, or copaiba and cloves. Sometimes oil of tar is added to these combinations. You can easily experiment with a few drops until you get the desired proportion. This medium is for use in mixing powder colors for either painting or tinting—for grounding, we imagine some heavier drying oil is used.

E. W. A.—Gold lustre is used just as it comes from the vial with a large square shader, if thick enough to be sticky, thin with a little oil of lavender. This applies to all lustre. Gold lustre is garish if used alone, it should be fired first, then the "covering" used over it, which gives a rich ruby effect. If the lustre rubs off, it has not been sufficiently fired, color can be used over lustre, lustre will always come off if used over pencil or India ink, it needs to touch the china. Color and lustre can be used on the same piece and fired together; color which comes out dull after firing is either insufficiently fired or $\frac{1}{4}$ flux should be added. We judge that the trouble is insufficient firing as lustre also rubs off. Vellum is used on china the same as a dusted or grounded color; the surface is covered with grounding oil, and after padding evenly the vellum is dusted on with a brush, being careful to keep the oil away from the oil. Keep putting on more vellum until the oily surface looks dry with color. This applies to all mat or powder color grounds.

When red comes out with a blue tone it is either fired too hard or has too much flux or oil. Belleek is better fired alone as it does not need as hard a fire as French china but can be fired in the top of a gas kiln or the front of an oil kiln with French china in the other part, as no kiln fires as hot near the opening. If you wish to import china direct from France instead of paying the two dealers, why not write direct to C. H. Haviland or Haviland & Co., Limoges, France; if they will not deal directly with you they will direct you to some French retail dealer, or write to Pouyat or Tressemains & Vogt. See advs, in K. S., they may direct you where to send.

Black outlines can be put on with either a fine brush or a pen for India ink, in the latter case, after mixing to a proper consistency, put the color in a little cup so that the pen can fill easily. We give fruit designs from time to time in K. S., but will soon be publishing a book of fruit designs both conventional and naturalistic, similar to the Book of Roses just being issued.

N. H.—In executing the nasturtium design for bowl by Adelaide Alsop Robineau in June 1902 K. S., the space above the design would be too garish if filled with solid gold, but a gold tracery such as is suggested would not be too heavy. A tinting inside of yellow brown lustre finished with an edge and bands of gold would be appropriate. Use a band about $\frac{1}{4}$ inch wide, about 1-8 inch from edge, 1-8 inch below the band finish with a line of gold. If you prefer you may fill in the space above design with a tracery in color, Albert yellow or yellow brown or carnation, or a gray green according to effect desired, let the bands of gold follow the irregular edge. We hardly think a solid tint would look well in so large a space as there is on your bowl above the design. Finish the outside edge with a band of color instead of gold if you use color tracery. The violet vases should be tinted either in color or lustre, but we do not advise a violet tint as that would not show off the flowers to the best advantage. The violets of gold are rather too pink in tone; if you use them, add Blanding or Royal blue.

F. P. C.—You will find treatment in flat color for simple decoration of plate designs in every number. The fish set has already been given as requested. Five different designs have been printed to give a choice, look over your back numbers from August to December 1902. To put on flat color, use a large square shader, mix your color (if in powder) with medium until of the consistency of tube color, then use rectified spirits of turpentine to thin until it will flow easily from the brush. If you use tube colors it will produce better results to thin the color as it comes from the tube, with oil of lavender. Lay on as evenly as possible so that brush strokes will not show but let a variation of tone appear, the color flowing heavier in some places than in others. The gold that is put up for photographic purposes would not be so good for use on china, unless you used it as you would a color for grounds. Gold in powder form to be used on china must be a soft red brown color and can only be obtained by precipitating the gold as in directions given. To make the flux, use sub-nitrate of Bismuth in powder form, which can be bought at any drug store.

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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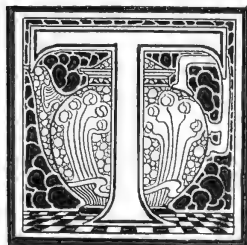
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KERAMIC STUDIO

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SYRACUSE NEW YORK

September 1903



HERE is little doubt that the field of artistic pottery is one of the best fields in this country to-day, and we may safely predict that Mr. Doat's articles will be of immense value to the independent artists who in the coming years will yield to the fascination of the potter's art. These articles are simple and practical, and it will be a satisfaction to see that modern exponents of the potter's art no longer follow the old and sterile policy of secrets jealously kept. Of what use were the marvelous discoveries of Bernard Palissy, which died with him. Of what use the absurd precautions taken at Meissen to prevent the secret of the manufacture of hard porcelain from leaking out, and the same secretiveness observed everywhere during the last hundred years, with as result, a complete decadence of the potter's art. The present renaissance of the art can be directly traced to the liberal policy adopted at Sevres in the last twenty years or so. This new policy has made possible the wonderful movement of individual clay working in France, it probably also has made Royal Copenhagen porcelain what it is. The modern artist potter seems more and more to follow the liberal and fruitful policy of sharing all technical information freely, and depending on artistic ability alone to hold preeminence in his craft. "Secrets of the trade" belong only to commercial manufactures that have no artistic inspiration to back them. Of course every artistic worker is liable to have some individual way of getting a result which is his own property, but even if he shares all technical information, others will not get the same results unless they have the same artistic ability, which never happens. No one can have a mortgage on information gained from others.

Students in pottery should guard against the probably vain hope of making wonderful discoveries, of finding new bodies, new glazes, etc. There is much to discover yet, but much has been found in the great laboratories already, and researches are the work of laboratories not of artists, who will soon find them a waste of time and money. Far better is it to be satisfied with a good body and glaze which suit one's work, even if of a well-known formula, and rely for reputation upon one's manipulation of the medium until the student stage is past.

This seems to be the idea which prevails in France, where the new bodies and glazes discovered at Sevres are offered to the public by reliable merchants, all ready to use. Mr. Doat gives in his articles the addresses of these merchants. One can buy at the same place as Sevres and import the porcelain or grès body prepared according to the Sevres formulae, with the glaze which fits this body. Of course it is to be hoped that equivalent bodies will be found in this country and that before long the cost and trouble of importing them can be dispensed with. There are immense untouched deposits of kaolin in the United States, and any amount of stoneware or grès. But the artist has no time to waste on experimenting with clays. The finding of the proper grès and porcelain materials from the American soil should be left to laboratories and schools.

articles by Taxile Doat, on Grand Feu Ceramics. There will be eleven articles as follows:

- Preparation of pastes—Grès and porcelain.
- Manipulation of clays, pressing, throwing, etc.
- Casting.
- Glazing.
- The kilns.
- Packing of saggers and kilns.
- Oxidising and reducing fires.
- Unpacking of kilns.
- Grand feu colors—Colored bodies.
- Grand feu colors—Mat and crystalline glazes.

The "Principles of Design," by Hugo Froehlich, "Clay in the Studio," by Chas. F. Binns, and article on "Simple Furniture," by Mrs. Elizabeth Saugstad, will be continued in the October number. They were unavoidably left out of this number.

By a singular oversight the Catalpa tree was printed Catawba several times in the article on that subject in the August KERAMIC STUDIO.

GRAND FEU CERAMICS

IV. PREPARATION OF CERAMIC BODIES—GRES AND PORCELAIN

Taxile Doat

IN the introduction to these articles, I said that I would write for isolated artists, fond of the arts of the fire, having only moderate means, but anxious to do useful work and to leave some mark of their passage on earth. Left to his own resources, the ceramist needs great energy to face without discouragement the many failures which his efforts to subjugate the clay are bound to meet.

During my life, I have met a number of artists, who frightened and disconcerted by prospect of failure, unfamiliar with the chemistry of colors and their difficult preparation, gave up the fight, without realizing their dreams, saying: "I also, could have made ceramics." As to myself I had the good fortune not to know the disappointments of the beginning, the only ones to be feared, because this art is so attractive that when one has tasted it, one cannot escape its fascination.

I will consider that my object has been reached, if I can avoid for newcomers in this charming craft these times of lassitude and discouragement, the thorns on the path, at the end of which they will find the reward of their work.

With a view to this result and in order to simplify and make easy the initiation to and understanding of the grands feux, I have purposely neglected in this series of articles, everything which refers to the fabrication of large pieces, and to mechanical and industrial production. I simply relate how I have succeeded in the practice of my art, the means and tools I use. The reader will then constantly find, aside from general processes of fabrication used everywhere, in Europe as well as China, processes which, being my own, have given to my production its special quality and variety.

They will see besides that I have tried to describe the various processes of the rich grand feu decoration, in a practical

We begin in this number the publication of the technical

and empirical way, free from scientific formulæ, in a simple and exact language, with a profusion of details for the benefit of those who will take interest in them.

I will not speak of faience, because it is easy to find everywhere clay suitable for faience, and because merchants who sell colors for this variety of ceramics are many. Only the grès and porcelain capable of standing the higher fires will retain my attention.

The ceramist, in order to produce durable work, must first possess a good plastic body, easily yielding to the thumb or the hand, whether he uses a material which nature has herself composed and combined, as in Europe, the clays of Nièvre, of Bauvaisis, of Provence and of Flanders, or makes a mixture of clays coming from different places, as is done for the Sèvres grès.

All continents contain natural grès clays; it is the duty of geologists to study them and make them known.

The artist will prefer natural grès, because in the case of mixtures a very serious study of clays will be necessary to avoid long and costly experiments.

Grès-cérame (ceramic stoneware) in order to deserve this name, must after firing, give a solid, hard piece, impervious to water, without the help of any covering or glaze, and must be suitable for objects of large dimensions, capable of receiving a varied coloration and a delicate and sharp relief ornamentation. These qualities, which Brogniart in his learned "Treatise of Ceramic Arts" gives to ceramic grès, make it resemble closely porcelain, from which it really differs only by the absence of translucency and whiteness. Grès and porcelain are both in the class of ceramic products impervious to water. But the grès paste has for the fabrication of large pieces considerable advantage over the porcelain paste, it is easier to work, more plastic, easier to fire without warping, and is much cheaper.

The impermeability to water, which protects the ware from injury by frost, the comparative ease with which it is worked and decorated, make the ceramic grès the best material for the outside and inside decoration of habitations, in climates where frosts are frequent. It will, I am sure, replace faience everywhere and some day dethrone forever a body which is inferior by its lack of solidity, consequently of durability.

The grès which I have most used is that of Sèvres. It is easy to prepare and not expensive. Its composition is:

Clay of St. Amand,	9 k. 335 gr.
Clay of Randonnai,	4 k. 500 gr.
Ground sand of Decise,	4 k. 335 gr.

The clay of St. Amand can be bought from its owner, Mr. Poulain, à Argenoux, commune de St. Amand en Luysaie (Nièvre), for 12 fr. (\$2.40) per 1000 kilos; the clay of Randonnai, from Mr. Aubert, à Tourouve (Orne) for 10 fr. (\$2.00) per 1000 kilos.*

The sand of Decise being the property of the great faience factory of Creil et Montereau (Oise), must be ordered from the Director. I have paid 26 francs (\$5.20) for 260 kilos, washed, ground and dried sand, or 10 francs (\$2.00) per 100 kilos.

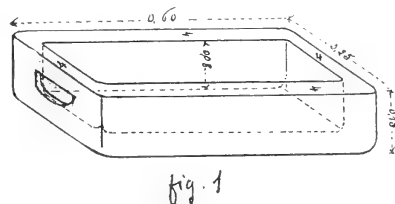
The two clays St. Amand and Randonnai, coming from the quarry in clods, are simply crushed dry with a hammer, until reduced to about the size of a nut. After being carefully weighed, the various elements are poured in a pail full of water. The clays will melt by themselves like flour. They are left to rest for two days. After this time they are stirred with a spatula and passed through a screen No. 60.†

* It has seemed advisable to leave the weights expressed in French measures, as French weights are now generally used for pottery work. A kilo is 1000 grammes, 500 grammes make a French pound, differing only slightly from the English pound.

† Prices of Brass wire lawn for screens: No. 60, 60c. per sq. ft.; No. 100, \$1.00 per sq. ft.; No. 120, \$2.00 per sq. ft. Marsching & Co., 27 Park Place, New York.

The screen is a metallic canvas made of brass. The nails which fix them to the frame must be of copper, to avoid the rust of iron nails. I get these screens from Mr. Louvier, 45 rue du Temple, Paris.

It is important to throw away only the refuse which does not go through No. 60 screen. It consists of particles of iron and of organic matters, in small quantity.



The above measurements in centimetres reduced to inches are about as follows: 24 inches long, 10 inches wide, 6 inches high; walls 1½ inches thick, 3¼ inches deep.

As this mixture has been diluted in a large quantity of water to make it easily pass through the screen, it is left to rest for two days, when the water is poured out and the mixture placed in a plaster basin (Fig. 1), which will absorb the water. The paste gradually hardens, and when found sufficiently firm, it is taken by the thrower.

This paste will acquire the distinctive qualities of ceramic grès by being fired to Seger cone 9, or a temperature of 1270° according to the thermo-electric pyrometer of Mr. Le Chatelier. If fired at a reducing fire, it will be better vitrified in its mass, more impervious to water than if fired at an oxidising fire.

For all grès, especially if pieces are of large size, the firing must be very slow and gradual at first, to avoid the breaking which a too quick firing would cause.

This grès body is of a very fine grain. It is easily worked by pressing or throwing. It is even probable that it could be satisfactorily handled with the mechanical processes in use in factories. Its drying must be watched carefully, in order to avoid cracks and change in shape.

The shrinkage of this paste, both from drying and firing, is such that one must take in the mould a piece 1 m, 125, to obtain after firing a piece one meter high. This grès, invented at Sèvres, has been studied not only with a view to give the qualities necessary to a good grès, but to make it as close as possible to the new porcelain, so that pieces can be made of grès and porcelain mixed. Its combination allows it also to receive with good results all the colored glazes which had been previously created for this new porcelain, to fire at the same temperature, at the same cone, and also makes possible the placing in the same kiln, side by side, of pieces of both materials. It can be treated with the same glazes and the same processes of decoration, and, from a ceramic standpoint, excels porcelain on the point of fabrication of large size pieces.

The necessity of making stands for my vases, and the wish to use only ceramic materials for every part of my productions, also the desire not to imitate the Japanese and Chinese who carve their stands in teak wood, marble or bronze, led me to adopt grès for the fabrication of these stands, and I have always been careful to fire the porcelain vase and its grès stand in the same sagger.

I have experimented also on a simpler composition of grès paste, which has given me excellent results:

Clay of Randonnai,	80 kilos
Sand of Fontainebleau,	20 kilos

The sand of Fontainebleau is furnished to me by the factory of Creil and Montereau, ground and dried for 90 fr. (\$1.80) per 1000 kilo.

Both the sands of Decise and Fontainebleau may be bought from Loulenc Freres, rue Vieille du Temple, 92, Paris.

This mixture is handled in the same way as the first, and both have the disadvantage, when they are fired in an oxidising fire to be, after firing, of a yellowish tone, which gives them the appearance of faience or pipe clay. They acquire their beautiful grey blue tone only in a reducing fire.

As I fire alternately with oxidising or reducing fires, according to the effects I wish to obtain, and as I do not generally execute pieces of large sizes, I have adopted a third natural grès clay called Kaolinic sand of Lange-Rollin (Nievre), owner, Mr. H. Carizot, 17 rue des Perrieres, Nevers.

It is highly important that this sand be very finely ground. It is very rich in alkali, which, in the shape of white muscovite mica, reaches nearly 6%. It is a complete product, which does not need any preparation or the addition of any other element. It keeps its fine ash grey tone in both fires. Its paste, of very fine grain, is silicious and resembles closely some Chinese porcelains. I have obtained with this grès very beautiful flammé reds of copper. It receives without creasing the glaze of the hard Limoges porcelain. Its shrinkage is somewhat greater than that of the Sèvres grès or the Limoges porcelain, and these shrinkages are deceiving, as it is difficult to get used to the fact that after firing a model may be reduced one fourth.

In the Salon of 1902 I exhibited the first fine pieces made from that grès, and gave them to the Museum of Nevers.

The black clay of St. Amand en Luysaie, which is the basis of the Sèvres grès, is a natural grès clay, which may be used by itself, without the addition of any other element. It is very fine and plastic. With this grès Bigot makes vases 3½ feet high, bath tubs 5 feet 7 inches long, 33 inches wide and 24 inches deep. It is the material which Carriès used for his ceramics, and which is used by his imitators, ceramists "à l'eau de rose" who have their wares fired in the kilns of the country, and who are legion.

Here then are four grès pastes, which all are easy, because their preparation can be made in small quantities, say 40 lbs., which does not require a costly outlay.

If in most cases the composition of grès is simple, it is not so with porcelain. The various porcelain bodies used in Europe are made of different elements. No natural porcelain paste exists.

I will not undertake here to make comparisons, or to give and scientifically formulate the composition of the various European and Chinese porcelains. I will only state that the extreme compositions of practically possible porcelains will be found between the following limits:

- 65 to 35 kaolin
- 20 to 40 feldspar
- 15 to 25 silica or quartz.

Kaolin is the plastic element, feldspar and silica are the fusible elements. The extreme combinations must receive, one a temperature of 1500° C (about cone 18), the other of 1350° C (cone 11), in order to vitrify, and from this fact the products are bound to have different properties.

The first extreme combination, very rich in kaolin and consequently in alumina, will resist well variations of temperature, will accept the hard felspathic glazes, on which the steel of the knife will have no effect, excellent qualities for table ware, but it will not keep a wide range of colors. The hard Sèvres porcelain invented by Brougniart and the Dresden porcelain are in this class.

The other extreme combination, with more silica and less alumina, fires at a lower temperature, which makes it possible to introduce as much as 16% lime in the glaze, so as to soften it

and to obtain more varied and brilliant colorations. To this type belong porcelains from China, Japan, Russia, Bohemia, Limoges, that of Chaplet and mine.

Between these extreme fabrications all intermedial combinations can be used.

At the beginning I adopted the Limoges porcelain which is about half way between the two extremes. The paste, carefully prepared, was bought from Mess. Lacroix et Ruaud, manufacturers of porcelain pastes, Limoges (Haute Vienne). They make four different qualities. I used to buy and buy yet for certain pieces the first of these four qualities, called FF (paste for figures and flowers.) It costs 18 francs (\$3.60) per 100 kilos. It is passed through the screen No. 120. Its formula is:

Pure kaolin,	37. 27
Quartz,	27. 35
Felspathic debris,	35. 36.

The glaze which fits this paste is of the hard type, that is, exclusively felspathic. It is sold for 12 fr. per 100 kilos. After firing the porcelain is of a pure white and beautiful translucency. Its palette is rich.

Porcelains worthy of attention must have many qualities. The paste must be translucent, hard, impossible to scratch with steel, homogeneous, very sonorous, completely vitrified, and when broken, must show a sharp angular break with a very fine and brilliant grain. In this condition it will be impervious to water and proof against injuries by frost, and will resist climates like ours in which humidity is a great disintegrating agent. These characteristics, especially translucency and vitrification, constitute the definition of porcelain. If one of them is missing, we have another kind of ware. If the paste keeps all properties except translucency, we have a grès; if it is not vitrified, we have terra cotta, faience or pipe clay.

Porcelain paste should be diluted in a zinc vessel, in the fabrication of which iron has been strictly avoided. Iron is the great enemy of porcelain, as particles of oxide of iron (rust) will make on the brilliant white, black spots which cannot be removed, a serious flaw, if it occurs on the decoration or on figures. After the paste has been in water two days, it is poured, as is done for grès, in a plaster basin, and when the water is absorbed, one has a soft paste ready for modelling. During these operations one must be very careful to avoid the introduction of dirt in any form.

As a rule porcelain makers do not manufacture their paste themselves, as it requires a special and costly outfit. Only the great manufacturers, owners of quarries, have their mills to grind the materials. Sèvres does not own kaolinic quarries but buys the best of the Limoges kaolins.

With the paste FF I made all my first ceramics. I used it from 1879 to 1895 and have very seldom had failures from any fact in relation to this paste and its glaze. But, after the creation at Sèvres, of the new hard porcelain, called PN (porcelain nouvelle), I found from numerous experiments, that it had among other advantages, that of firing at a lower temperature, about 100°, of allowing a more rapid work in the execution of pâte sur pâte decoration, without any flaws resulting from this rapid work, and also the great advantage, so long studied at Sèvres and at a great cost, of making possible the combination of grès with this porcelain and its glaze. I did not hesitate to adopt it, and was going to begin its fabrication, when an engineer, Mr. Frugier, a pupil of the laboratory of Sevres, fixed his residence at Limoges, 17 rue du Chinchauvaud, in order to manufacture the new paste, which he sells:

Porcelain paste, PN., dried and sifted, 15 fr. (\$3.00) per 100 kilos.

Porcelain glaze, PN, 20 fr. (\$4.00) per 100 kilos.

Its composition is:

Kaolin,	38
Quartz,	24
Feldspar,	38

and it fires at 1330°, Seger cone 10.

My present art production is made of this paste. The temperature at which it fires makes it possible to fire in the same kiln the mat glazes liable to be volatilized, and the applied pastes, which need a hard fire for their translucency. It resolves itself to a question of careful packing of the kiln, the glazes at the foot, and the pastes on top of piles.

The paste PN does not get out of shape easily, it has a brilliant whiteness and a milky translucency. It will stand many firings, a great quality for the saving of pieces which have not come successfully out of a first fire.

Mr. Frugier prepares also for casting, this same paste PN with the addition of a certain silicate, the formula of which I do not know, which makes it coagulate rapidly and allows one to take a piece promptly out of the mould. This special paste is

called Paste PN for casting (in French, coulage) and costs 15 fr. (\$3.00) per 100 kilos.

As all these descriptions of pastes might leave undecided those who wish to try an artistic fabrication on a moderate scale, I will advise them to confine themselves at first to two materials, a grès paste and a porcelain paste.

I advise them to adopt the porcelain PN Frugier and the Sèvres grès. The PN glaze will fit both bodies. Both will fire in the same sagger at the same temperature, and can be treated with the same decorative processes without giving the same results.

After they have solved the difficulties of the beginning, they will be in a better position to experiment on the other bodies I have mentioned. And if they wish to try only one material, they should without hesitation choose the porcelain, because it has over the grès the advantage of standing many refirings.

I will add, as a conclusion, that after they have taken from the kiln a few successful pieces, they will soon understand why one becomes a ceramist.



CONVENTIONAL BIRD DESIGN FOR PLAQUE—DOROTHEA WARREN

OUTLINE design with Deep Red Brown, Brown 4 or 17, and Black. Paint background for first fire with Yellow Ochre, Silver Yellow, Brown 4 or 17 and Black. For birds, use Dark Blue, with a touch of Deep Purple and Black. Second fire, use Yellow, Brown lustre for background. The pale green tone on the wings of the birds is Apple Green toned with the blue used on the birds.

BONBONNIERE

Edith A. Ross

Design for Bonbonniere to be carried out in various colored metals and enamel with black outline.



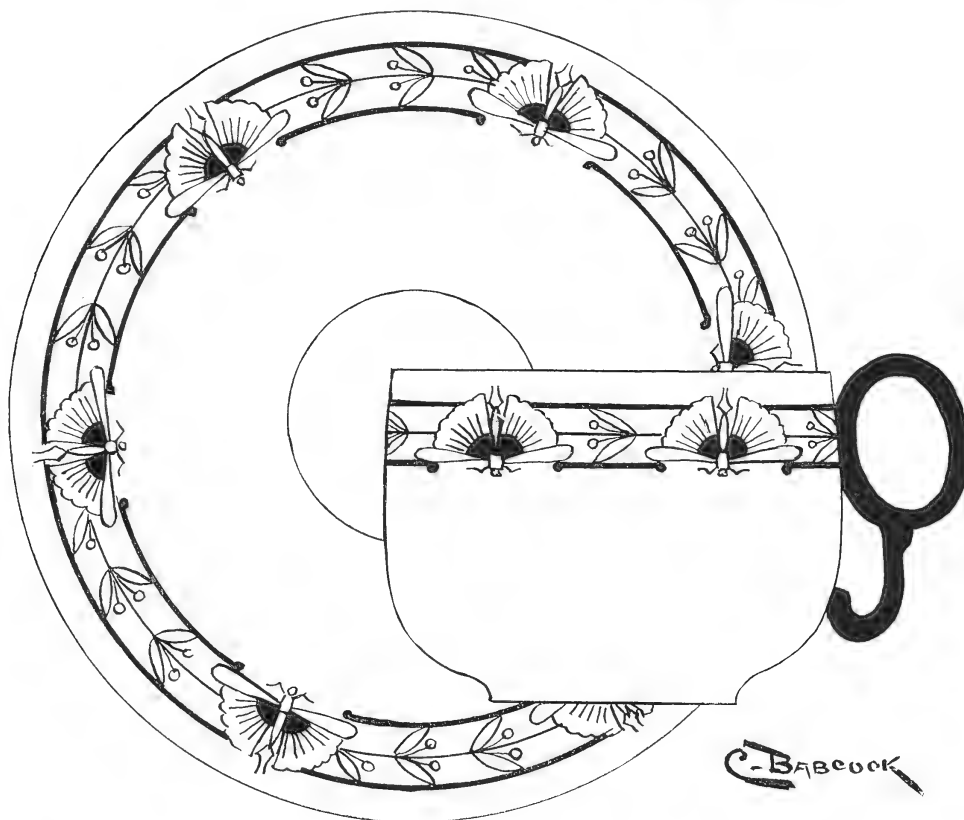
DESIGN FOR CUP AND SAUCER

C. Babcock

Treatment, ground of border violet; with gold edges, leaf pale yellow green with dull red berries; head and first section of body of insect pale green; rest of body dull pink, upper wings dull pink, under wings gold in triangle, the balance green grey—black outlines.



BONBONNIERE—EDITH A. ROSS



DESIGN FOR CUP AND SAUCER—C. BABCOCK



ROOKWOOD ARCHITECTURAL FAIENCE—(Page 110.)

THE CLASS ROOM

All subscribers wishing to follow the course of lessons on design by Mr. Froehlich, may submit their best three solutions of each problem to this department. They will be criticised in the magazine so as to afford the mutual help of class room criticism. The work of one lesson will be criticised in the following number of KERAMIC STUDIO. We can not return work sent for criticism.

After working out solutions and marking them from 1 to 6 in order of *merit* not of *making*, select the best three of each problem and make copies, using brush and India Ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach KERAMIC STUDIO before 8th of month or no criticism will be given.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

○ ○ ○

The contributions to this department are so numerous that we will have to confine our criticisms to the best work illustrated. The designs not given are either uninteresting in treatment, not well considered in regard to proportions of black and white, weak in drawing or color, not properly conventionalized or not simple enough.

M. M.—Tile design with naturalistic motif would be very good if the lower part of the flower were bolder, the two lower petals, for instance, might be wider, occupying the corners of the tile. The Byzantine tile is good but center design might have been stronger. The abstract border for cup is good also.

E. V. M.—Horse chestnut design for tile would be better if larger, the sides of tile cutting the points of some of the leaves—the idea is good. The cup and saucer design with straight line motif is good—a stronger line on lower edge of border would improve it, also an added line a short distance below.

B.—The tile design of Gladiola is fine in every way, the three dots above stamens might be omitted. The Medieval tile is also good. The cup border is good in dark and light, the handle of cup is not a good shape.

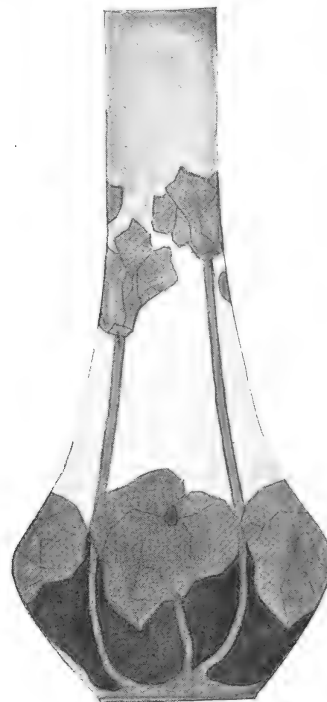
H. B.—The Arabian tile design is good but might be richer in dark and light. The vase design is extremely well considered.

A. W.—Tile design would be very good if the line were wider. The cup design has the same fault, it is weak in color, it is also not so good in invention as the tile.

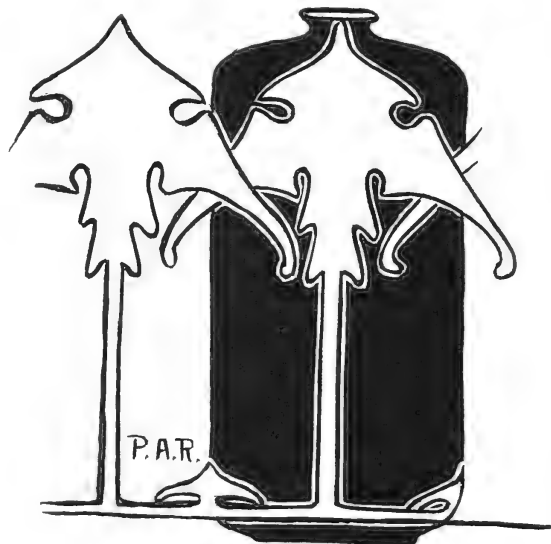
E. P. H.—Cup design is refined but a little weak—do your work for reproduction in strong black and white.

P. A. R.—Both tile and cup and saucer borders are good in every way. The vase design would be better applied to a larger vase.

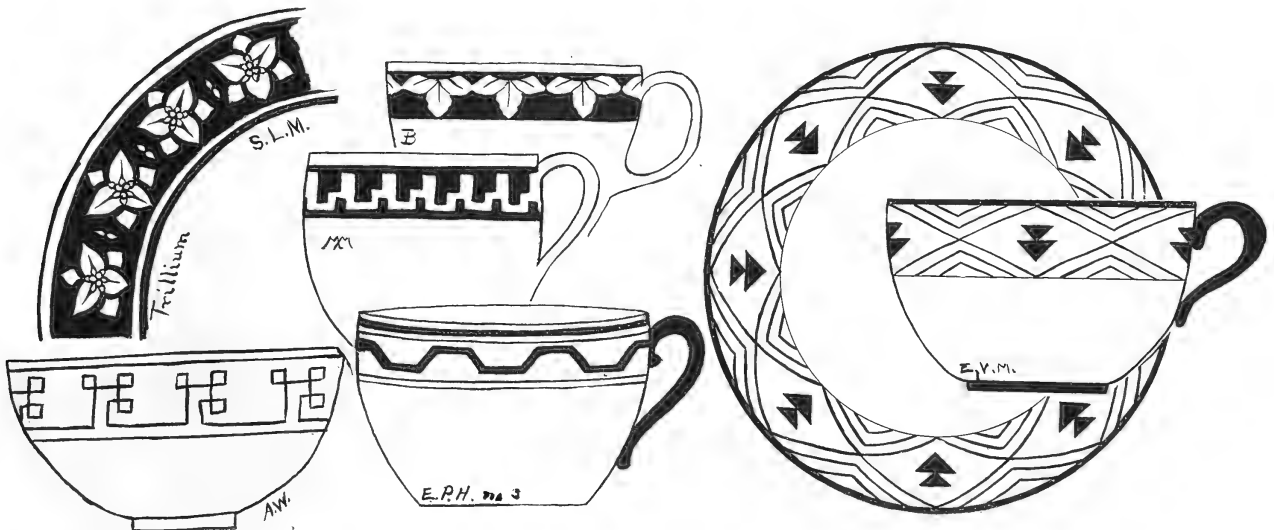
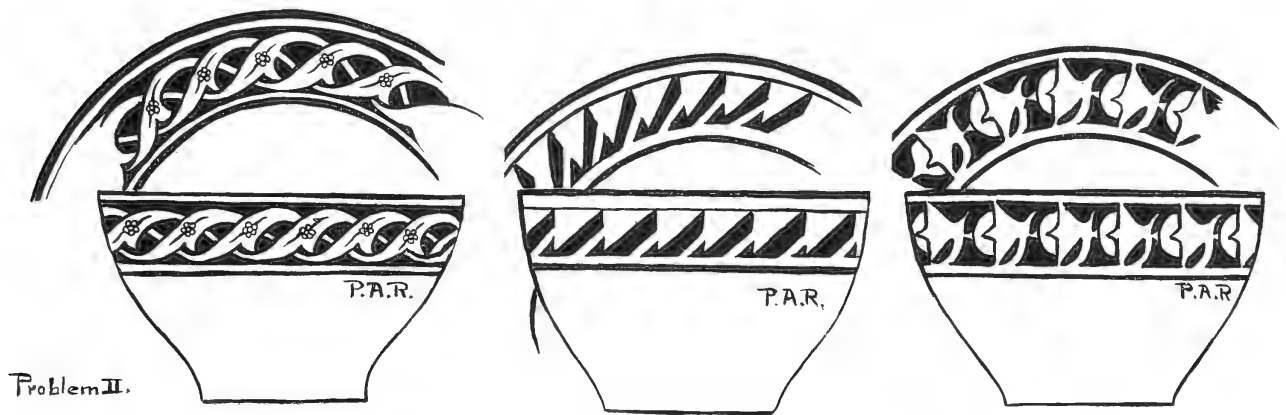
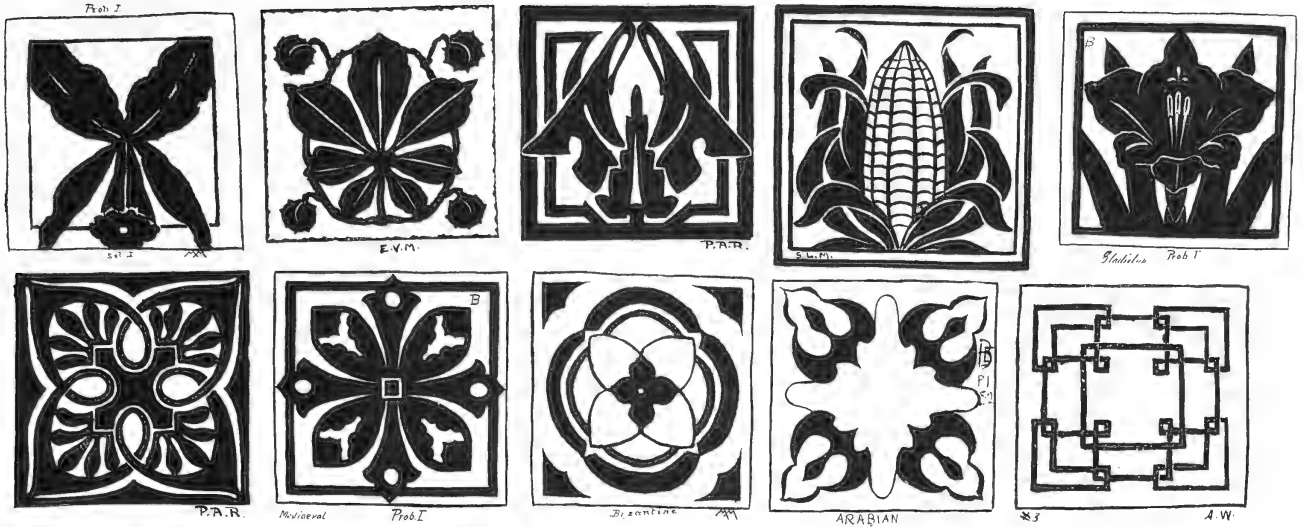
S. L. M.—Corn design for tile has good balance of dark and light, it would



be better if the husks were simpler, larger and fewer in number—also, the husks should go straight to base of tile as they give the effect of a stunted ear of corn by their direction toward the center of base. The Trillium border is good, it might perhaps be better if the two dots were omitted, or the design more widely spaced.



Problem III.





TROUT DESIGN—MRS. STANLEY P. WARREN

RHODIAN WARE

RHODIAN ware is so called because it was manufactured by Oriental potters in the Island of Rhodes. It was made of rather coarse clay, covered with a fine white silicious slip, on which the decorations are painted, the whole being then covered with a thick glaze formed of silica, oxide of lead and soda. Its chief characteristic is the use of a fine red pigment which owes its color to the red oxide of iron. This pigment was applied in very thick body, so that it stands out in actual relief like drops of sealing wax. Plates, tall bottles, jars, mugs and pitchers with handles are the usual forms. They are all decorated with patterns of great beauty and splendour of color, brilliant blues, greens and the peculiar red being the chief. The designs are mostly flowers and sprays springing from one branch, often with black scrolls on blue and white. Geometrical patterns are also used but mostly for wall decoration.—*Pottery Gazette*.



TREATMENT FOR PAINTING TROUT

Mrs. Stanley P. Warren

TO make a success of painting fish, trout especially, three firings are necessary. The first painting should be very soft, the colors nicely blended. Begin by using a thin wash of carnation on the belly of the fish, leaving the white china on the under side. Next above the carnation use Deep Blue Green, then Yellow Brown and on the back Brown Green. These colors are stippled or padded, the edges nicely joined until the carnation blends into the white china. The fins are carnation with a touch of black (or grey for flesh), the edges of the lower fins are white—taken out with cotton on tint edge—sometimes a delicate touch of enamel is used for the last firing. The background should be Apple Green and Baby Blue and Copenhagen Blue. The weeds are made with Brown Pink and Grey, or Royal Blue and Brown Pink. The rocks the same colors repeated, put in softly. The spots on the trout are put in for the second firing. The fish darkened with the same colors as those used for the first firing. The dark back of the fish is strengthened with a thin wash of Shading Green.

The blue is washed over the weeds and rocks for the second firing and the background touched in the weak places.

The third firing is needed for the finishing touches about the eyes, gills, etc., to strengthen the color where it has fired out.



TREATMENT FOR PEONIES (Supplement)

Marshal Fry

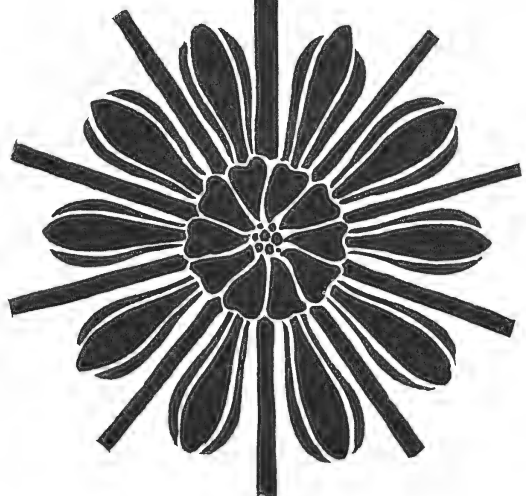
First painting.—Flowers: Mix equal parts of Yellow Brown and Moss Green for the fine white petals. Use Gold Gray and Yellow Red for the pink petals. For red flowers use mixture of equal parts, Red and Ruby, leaving the light side quite light. Leaves and background: Shading Green, Brown Green, Moss Green, Yellow Brown, Auburn Brown, Violet No. 2 and Deep Blue Green. Do most of the modelling and crisp brush work for the first firing in order that the work may afterward be finished with scarcely more than flat washes.

Second painting:—Albert Yellow in centers of flowers, also same mixture as used before in white petals, Wash Rose over pink petals. For red flowers use same mixture as before, with wash of Rose on lights. The same colors as used before are used in leaves and background.

The third painting consists of washes of color with a few sharp touches.



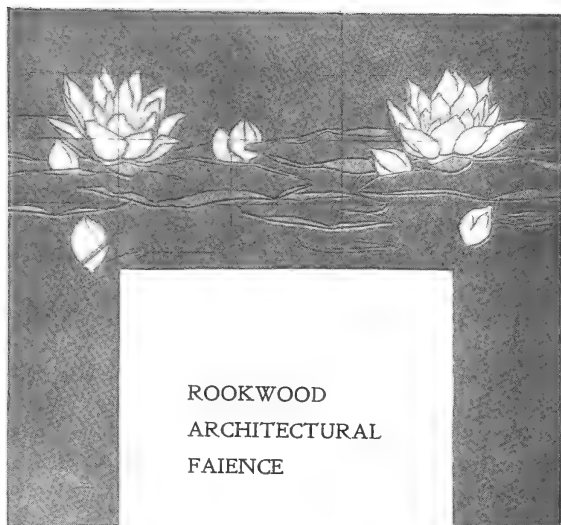
Inside of Bowl shown on
pages 108-109





CHRYSANthemum DESIGN FOR BOWL—LUCIA A. SOULE

TREAT this design in gold on a deep ochre or yellow brown lustre ground, tinting inside of bowl in ivory tint or lustre. An outline can be added, if desired, in black, brown or red. For a darker treatment the ground can be dusted black or black lustre, flower in orange lustre for first fire and ruby lustre for second fire, leaves and buds should be gold for the first fire and dark green lustre for the second fire, tint inside of bowl ivory or pale green.



ROOKWOOD
ARCHITECTURAL
FAIENCE

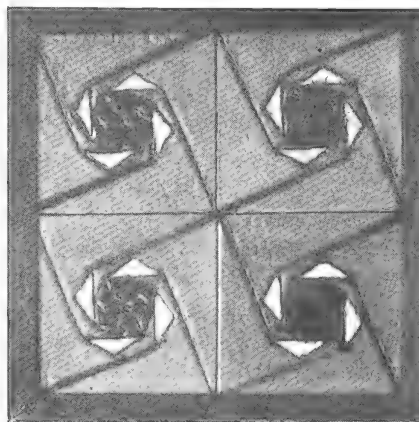
EVERYBODY has, in the last two or three years, become familiar with the interesting mat glazes of Rookwood. A good mat glaze seems to be the goal for which all makers of artistic pottery are striving at present, and the more taste and refinement in matters of interior decoration grow and spread, the more it will be found desirable to avoid the flowing, mirror-like glazes which are used on all cheap potteries. The fine, silky glove finish of the old Chinese porcelains remains, in this problem of glazes, a model of artistic taste which cannot be surpassed, but here we are in presence of porcelains and grès fired at a high temperature, in which the glaze makes a whole with the body, is practically a part of it, and receives from the hard fire, qualities which cannot be expected in softer potteries, the glaze of which is only a glass, covering or hiding the body.



From the first productions of Rookwood, the flowing glazes and brown decorations which made its success, to the present developments, the Iris and Sea Green wares, and the mat glazes, we follow the remarkable evolution of a pottery which always strives for improvement and artistic perfection, and if all the experiments in mat glazes have not been equally successful, if the different results obtained are not all satis-

factory, they are always another step forward, and it may safely be predicted that the last word has not been said.

The making of architectural faience, mantelpieces, tiles, friezes, etc., has been the natural consequence of the development of mat glazes at Rookwood. We are evidently entering a period of complete revolution in the interior decoration of habitations, a revolution which has already progressed in other countries, in France for instance, much more rapidly,



than in ours. In France grès is almost entirely used for architectural purposes, and it has over faience the great advantage of being fired at a higher temperature, thoroughly vitrified, and consequently more durable. So far the manufacture of artistic porcelains and grès in this country is in its infancy. In fact outside of a few individual experiments, it has not yet begun. That it should and will become one of the important





features of the great handicraft movement which is manifest in every direction, there is no reason to doubt. It is our hope that Rookwood, which has been for so many years at the head

of the artistic potteries in the United States, will also before long lead the movement for the transformation and improvement of bodies.



COTTON PLANT—CORA STRATTON

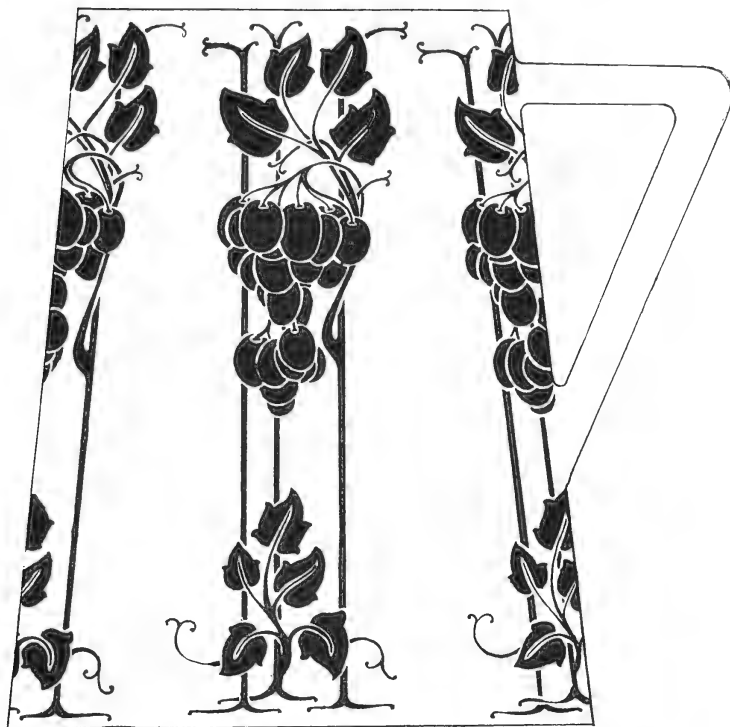
FLOWERS, Rose on edge of petals, shading into Primrose Yellow, for the base of flower use Yellow Green and Brown Green. For the cotton ball in the center of study use Meissen and Finishing Brown with touches of Gray. The cotton extending from the ball, wash in with

Ivory Glaze and dust lightly with Copenhagen. For the leaves use Royal Green, Brown Green with touches of Violet of Iron.

Background in tones of Brown shaded down from Finishing to Meissen and Yellow Brown to Yellow.



MOUNTAIN COLUMBINE—MRS. E. L. HUBBERT



DESIGN FOR MUG

Russel Goodwin

THIS design to be carried out in gold, yellow brown lustre in wide panels and ivory lustre in narrow panels. Outline in black or dark brown, connect the tendrils at top leaving an edge of ivory lustre finished with gold. Dark green lustre can be used over the gold leaves and stems for second fire.

A treatment in dull blue and green is white is also effective.

TREATMENT FOR MOUNTAIN COLUMBINE.

Mrs. E. L. Hubbert

THE Mountain Columbine is a bluish purple flower with a white center, the depth of color varying. Banding Blue, Royal Purple, a touch here and there of Ruby or Ruby Purple, Albert Yellow, Yellow Brown, Royal Green, Brown Green and Dark Green are the colors necessary for a naturalistic treatment.

FUSCHIA VASE

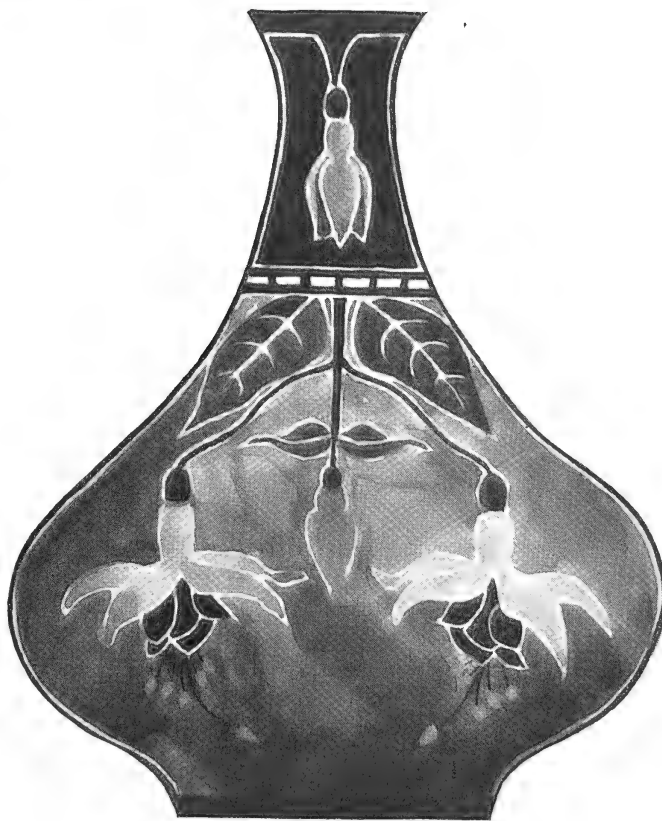
Jennie E. Hanson

FOR neck of vase Black lustre. Background below division line Ivory or Brown lustre mottled, darker at base. Plant stems, stamens and sepals of Ruby. Flower petals, Violet. Oval form at base of flower, Light Green lustre—same on small leaves. Large leaves, Dark Green lustre. All outlines and panel divisions Gold.

Second fire, use same colors, except that Ruby is washed over with Orange lustre.

STUDIO NOTE

Frances X. Marquard has closed her studio until Sept. 20.





LOTUS DESIGN FOR PLATE—MISS FRENCH

This design is adapted from the Egyptian lotus blossom and is effective in blue and green on a white, black, or gold ground. It also can be carried out in a dull red on a pale ochre ground.

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

SUGGESTIONS FOR LEATHER WORK

Annah C. Ripley

GIVEN a work-bench, enthusiasm and patience, a bit of leather, and a high ideal—and what may be accomplished? It is simple to describe processes—to explain that this tool is used to produce this effect, that color to produce that; all of which is very important in its way. But it is nevertheless of minor importance as compared with the underlying creative principles at the root of all successful work, whether handicraft or some other form of self-expression. Before proceeding therefore, to describe these certain processes, I wish to emphasize their secondary position as related to the whole. However fair your technique, remember that process is the means, *not* the end, and that it is the thought—the conception—back of the expression of it, that stamps your work as vital or as lifeless.



Old Mexican saddle flap.

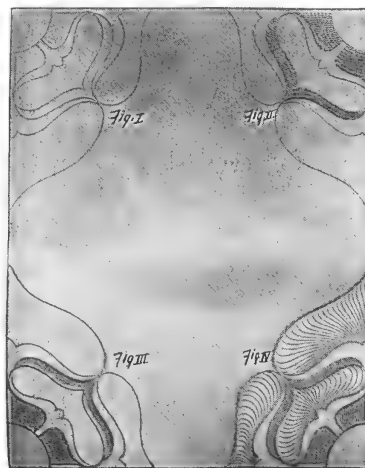
A work-bench provided (a soft wood table or carpenter's bench, and a high stool), the selection of a side of russet kid or calf skin, tanned without oil or soap stone so that it may be readily modelled, comes next, and brings you face to face with the question of *what you mean to do with it*. I have chosen a simple design as illustration. Whether you have studied design or not you can at least, by a combination of forms—circles, squares, triangles, parallel lines, or what you will—make some kind of a pattern; and this pattern, with the aid of some dull pointed instrument (an agate point if you have one), you can certainly transfer to your leather. Make your drawing in charcoal, the result being freer than with pencil, and I would suggest making your first sketch on a somewhat larger scale than you expect to use, dispensing as far as possible with ruling, tracing and measuring. The natural irregularities will only add strength. When you imagine an Oriental rug, a Persian tile, Delft plate, old tooled book-binding, or any individual masterpiece of craftsmanship, reproduced without its irregularities, you will readily understand the force of this suggestion. All vigor would be gone.

There is an indescribable charm to an untouched piece of leather—beautifully tanned—full of possibility. The finished work, however elaborate, lies somewhere within it, and the slow and laborious process of moulding it to express one's

thought is distinctly fascinating. Nothing that has ever been done to leather before can prevent you from doing exactly what you wish to do to this! It may be very bad—in which case you will not repeat it. At least so much is accomplished.

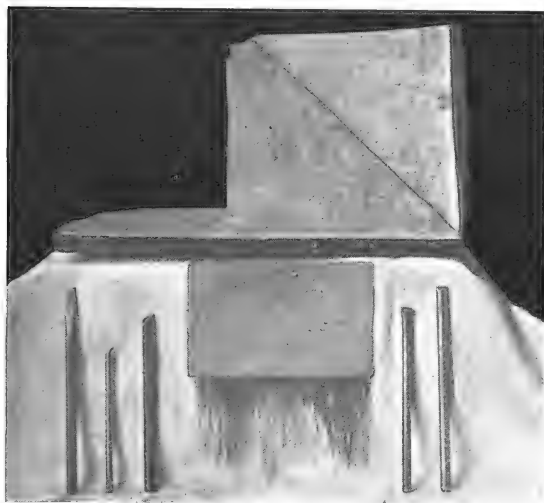
There are many styles of leather work—illuminated or Cordovan leather, carved and embossed leather, leather inlay and applique, pyrography, and gold-tooling; and the description of no one of these styles can begin to suggest all the possibilities of this most charming of mediums. From them each I think we may choose certain particularly strong features, combining them to produce our individual effects; and in the example I have chosen as illustration I have endeavored to suggest the application of these leading principles, advising the individual worker, when a general working theory is once even roughly grasped, to insist upon developing his own style. Each worker is his own best teacher, and each personal effort at expression does more to develop his work than any amount of definite instruction from some more advanced worker. The following process is purely suggestive:

Fig. I. Shows the design cut in outline into the leather. Before cutting the outline, lay the leather upon a slab of marble or stone in order to secure absolute resistance to your knife, and then wet the skin with water to soften it. If the leather is thin, sponging the surface will be sufficient—if heavy and stiff, soak it for several hours and then partially dry it. The illustration shows the kind of knives used for this outlining. For very fine work you will use a small blade, manipulating it in the fingers with a general finger and wrist motion; whereas for heavier, broader effects, by placing the tool in a wooden handle and holding it in the hollow of the hand, it is possible to obtain a strong, vigorous shoulder motion of great freedom. Hold the knife absolutely upright, drawing the forward point of the little blade firmly toward you. Always make your cut bold and firm, making as long a stroke as possible. The knife is not used on Cordovan leathers—in fact, I think it is exclusively a Mexican suggestion, but one of great importance as enabling a free-hand stroke like that of a brush, quite impossible to get by hammering in the outline. No amount of careful *finish* can counteract a weak outline—it is the most important step of the way.



Leather showing different phases of tooling.

Fig. II. Introduces the question of relief. Think of your leather as a bas-relief in clay. Here you are independent to use as much or as little *tooling* as you like—to produce any effect you wish. Tooling is a purely technical process depending for its individuality entirely upon originality of idea. There is among leather workers what is known as the "etiquette of the tool"—that is, we leave each other's methods of tooling alone! If we see an effective tooling we avoid it and invent another. These tools are tiny stamps of different designs which, hammered into the leather around the design, have the effect of raising the figure. A section of a wheel spoke is the best possible hammer for this purpose, the balance being perfect and enabling a rapid succession of running blows. Some workers use very elaborate tools and a great many of them, while others prefer to use as few as possible on account of their rather stereotyped effect. The perfection of tooling is shown in the old Cordovan leathers, some of the designs being most beautiful. Snow crystals, sea weeds and shells, cross-sections of seed-pods, and numberless natural forms are all suggestive in designing one's own tools. Any die-cutter will make them to order.



Three knives for Fig. I. Tools for Fig. III. Gilder's cushion and brush.

Fig. III. Shows the use of the modelling tool. This is shaped as a bevel, one edge straight and sharp to fit into the cut, and the face of the tool smooth, slanting away from the straight edge. (See illustration). By drawing this tool heavily along the cuts, where one part of the design should be made to seem to lap over another, the effect of modelling is produced. This tool is also used to smooth the rough edges left by the background tool. Other modelling tools in various gauge-shapes are used on the face of the design to hollow petals, flat surfaces, etc., and to round up the design from the wrong side of the leather if greater relief is desired.

Fig. IV. Shows the finishing touches done with the knife after the tooling is complete. It is necessarily free-hand work and correspondingly critical, as a weak line or the least slip may ruin your completed work. This knife-work is of especial value as giving another opportunity for free-hand work. As we progress in one work we become more and more impatient of mechanical effects. Never trace these lines on the leather before cutting them—use your knife as though it were a pencil.

So far we have produced our effect simply by the manipulation of the leather itself. The use of color or metal involves



Old illuminated Cordovan leather.

the application of other materials, and naturally follows, in an evolution of process. If, for instance, you should wish to put a gold background into your work, you would have to equip yourself with varnishes, gold size, a gilder's cushion and brushes, and book of gold leaf. This process resembles the old process of manuscript illumination. First cover the surface to be gilded with a varnish heavy enough to stop the pores of the leather. When this is dry, go over it with a quick gold-size (procurable at any artist's supply store) and when just dry enough to still be tacky to the touch, the gold may be applied. One has to become skilled with practice in order to be an expert gilder and able to handle the gold leaf easily. Blow a sheet of it onto your cushion (never touch your fingers to it) and after straightening it with a palette knife provided with the cushion, cut it into pieces the necessary sizes



Portfolio by the Misses Ripley.

and shapes to fit your spaces. A camel's hair brush (see Ill.) comes for the purpose of lifting the gold from the cushion to the leather. You pass this brush several times through your hair in order to fill it with electricity, and then, by laying it across your piece of gold, can readily lift it, as with a magnet, to the space on your leather already sized. The size being tacky, the gold immediately sticks to it. When your space is completely covered with gold, leave it to dry for some time before dusting off the edges of loose gold. When you are sure that the size under the gold is perfectly dry, brush off the loose gold with a soft camel's hair brush very gently so as not to bruise the gold, and finally cover the surface of the metal with a transparent varnish of some kind to protect it. These are roughly the general principles of gilding. After mastering these outlines, further details will very naturally suggest themselves to you—such as burnishing, coloring over the metal, as in Cordovan leathers, tooling over metal, "gold-tooling" with hot tools, etc., etc. The subject once opened to you it is very advisable to work the details out yourself.

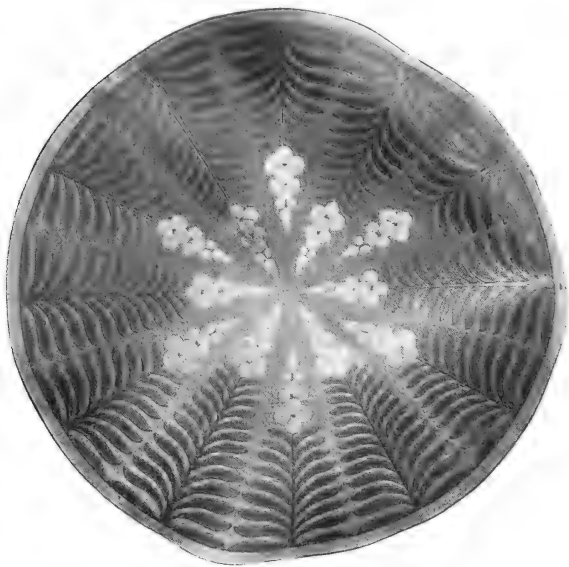


Table cover, gold and green decoration, by the Misses Ripley.

The same principle holds in the matter of color. Remember that certain pigments and certain dyes have withstood the wear of centuries, and try individually to think out some way of successfully applying these *known quantities* to your work. I do not know any two leather workers who produce the same color effects, doubtless because it is a branch of the work very seldom taught, each one being obliged to think it out afresh. If you once learn imitatively to use given means to produce given results, you will be very much more apt to follow that teaching unthinkingly, than to develop individual methods.

Which brings us once more, in conclusion, to the thought of *individuality*. In order to be successful with any kind of hand work we must make it individual—sincere—conscientious. Honest machine-made work is far better than careless, mechanical hand work. Let us insist upon doing our tooling as well as it can possibly be done—gilding, coloring, finishing so well that we ourselves are convinced we cannot do better! We shall never reach that point—it is quite safe! Aside from

the artistic and economic view of the matter, from a purely commercial point of view it is undoubtedly the safest policy.



ANSWERS TO INQUIRIES

N. H.—In making over the walnut wardrobe into a bookcase on the lines of the one shown in the article in the July number, the old feet may be used very satisfactorily, fastening them on with large dowels after the frame is built. If there are only two, two more should be turned, as there should be one under each front corner. The back feet may be simply turned, round and tapering slightly.

Projecting posts would not look well, nor ones that were turned. A square, built-up corner, like that shown in the chest with one drawer in the article on construction, would be best in this case. It should not be more than 2½ inches. Three inches is too heavy looking for such narrow doors.

There should be a strip the same width at the top and bottom of the ends (enclosing a flat panel set in about 3-16 of an inch) and at the bottom of the front.

The closets should be built separately and joined by a strip 1 3-8 inches wide at the bottom of the front and back. The front strips may be set back as much as 2 inches if the case is long. The bottom shelf is fastened on top of these strips which makes the total width 2½ inches like the rest of the framing. Another brace is put across the top at the back and the top over all, projecting 1 inch all around. The edges should be slightly rounded. A narrow, simple moulding, ½ of an inch wide, would add much to the finish. It should follow the line of the shelves where they are set in, and the curtain should be hung directly under it. I do not think that a wide shelf at the top with china on it, and the curtain below that, would look well. It does not seem appropriate and the proportion would not be so good. The doors of the closets might be glazed with small square or diamond shaped panels, and china and bric-a-brac kept there. If there is not enough wood in the wardrobe for shelves, which should be at least ¾ of an inch thick, they may be made of white wood, stained to match, and a facing 1½ inches wide, of walnut, put on with dowels and glue.

If the doors are glazed their frames should be 2½ inches at sides and top, and 3½ at the bottoms. If panelled, 2½ at sides, 5 at top and 7 at bottom. The panels are the only place where carving would look well. The suggestion for carving in your sketch does not make a logical division of the doors.

Wooden hinges are clumsy and would not be at all appropriate. Brass ones, unpolished, would look very well, but brown bronze is much handsomer on walnut and no more expensive.

The case should be 4 feet high and not less than 5 feet 6 inches long for good proportion, 6 feet is better.

It may be so constructed that the top may be taken off and center part out, and so be much easier to move.

L. S. C.—Dealers in materials for pyrography usually keep suitable stains and varnish. Devoe's are always reliable. Water color can be used very effectively on leather. Mix enough to go over your entire piece before beginning to work, and try it on another piece of leather, so as to be careful you have the right shade.

We hope to have an article on Basketry in the October number giving practical instruction in weaving Raffia and Rattan.

Mary White's first book on Basketry is very good for beginners and can be bought at the Guild of Arts and Crafts, 109 E. 23d street, New York.

Raffia and Rattan can be bought at some of the seed establishments in New York and at L. O. Burnett, 288 Fulton street, Brooklyn.



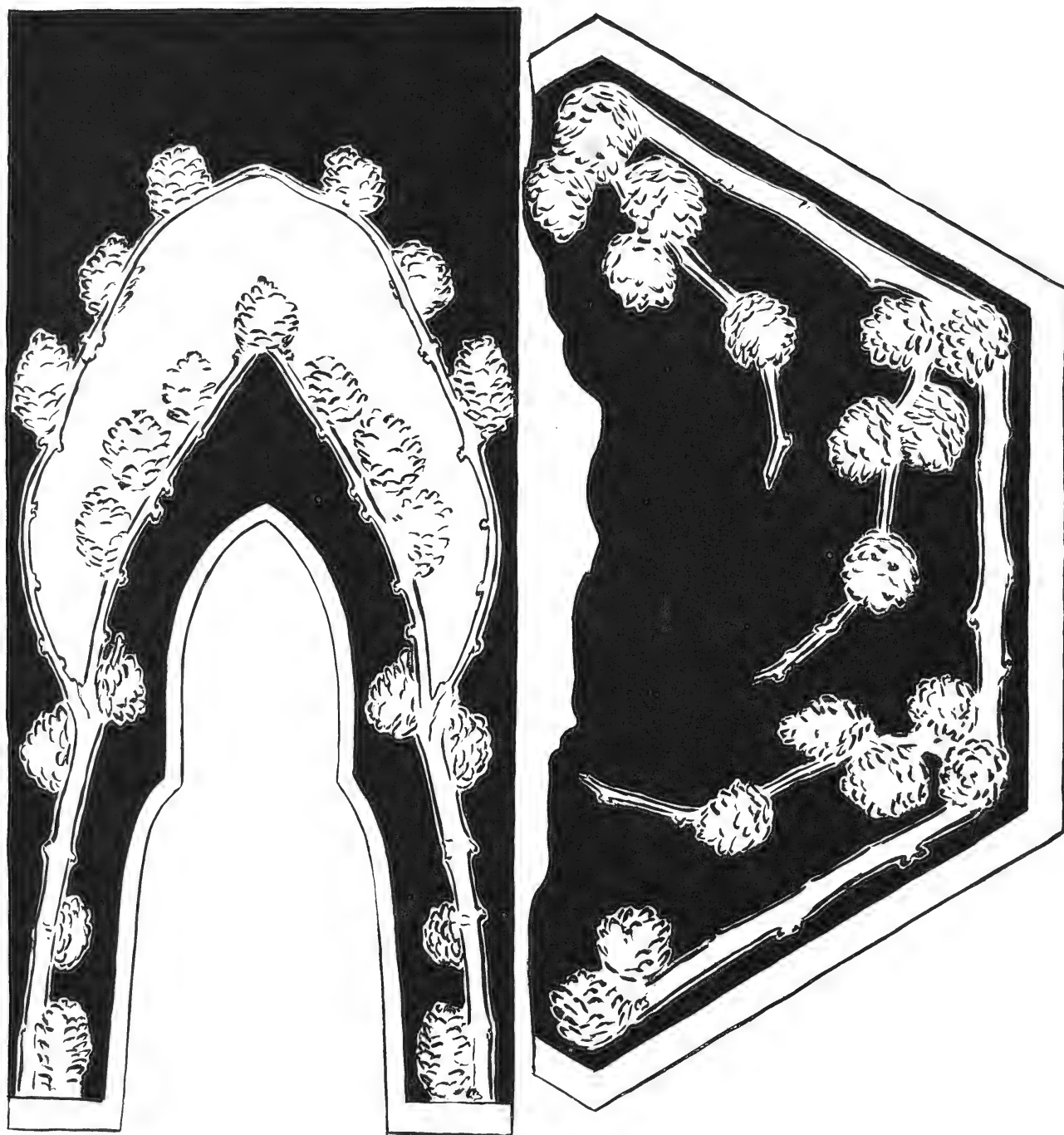
PYROGRAPHY

TREATMENT OF DESIGN FOR TABOURET—(Page 118)

Katherin Livermore

AFTER burning the outline fill in the main background with a spider web effect, let the radiating lines start from the center of the top; fill in between them with slightly curved lines (to represent the web)—these must be placed very close together to make a *solid mass*—the effect is very pretty.

The little border space between the stems and the outer border may be worked out in the flat shading and the outer border should be stippled very dark and heavy. When this is done, shade the cones and branches delicately. Treat the legs in a similar manner.



DESIGN FOR TABOURET—MIRIAM SAUNDERS—(Treatment by Katherin Livermore Page 117)

ANSWERS TO CORRESPONDENTS

L. K.—The Persian bowl design by Ethel Pearce Clements in March 1902 KERAMIC STUDIO has a ground of dull red and deep cream. The bands at base are gold with black outline—band at top is dull green with gold lines above and below and across the green—outlined in black. Center medallion, dull red ground. White parts, gold; dotted parts, dull green; tear shaped center of leaf, deep turquoise or dark blue, black outlines. Border of medallion, dull green with gold edges and tracery.

H. E. B.—Amateur painters have a perfect right to make a copy, themselves, of anything published in color or black and white, also to receive money for that copy, but they are prohibited from reproducing by any mechanical process in such numbers as to be put upon the market in competition with the original design. Pencil drawings are seldom reproduced—crayon is used or charcoal. A very black pencil might perhaps do for reproduction.

To loosen caps of tubes of water color or oil paints hold a lighted match under side of cap and turn the cap slowly so as to heat on all sides—be careful not to heat the tube itself, and unscrew the cap before it cools again. The best way to get work to illustrate is to make an illustration of some well known book or poem and send to the different publishers asking if they wish any illustrating done and at what terms, if they like your work.

A. W.—Historic ornament is the ornament or motifs used in design by Historic peoples such as the Chinese, Egyptian, Greek, etc., and the older styles of the English, French, Germans, etc. The first two years of KERAMIC STUDIO, have a series of articles on Historic ornament. You will find in the public libraries works on the subject by Racinet, Owen Jones and others.

We give a design every month made from some Historic ornament, but there are too many different styles to publish all at one time.

N. H.—Probably with a vase decorated naturalistically gold handles, etc., would be as appropriate as anything. We should perhaps, prefer dark coloring on the handles. Lustre could be used if desired but either gold or color is more desirable.

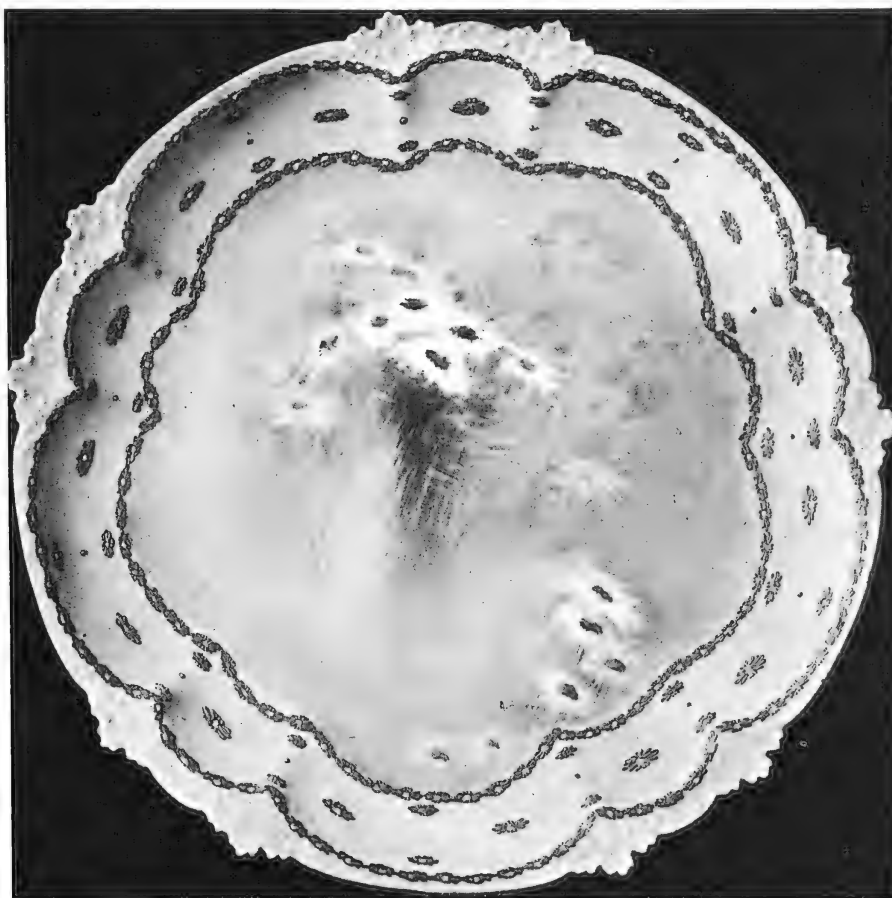
L. M. E.—A painted piece can stand almost any length of time without firing if not exposed to moisture or any injurious contact. There is no color in the china palette which will make an exact Cardinal red. Blood red dusted makes a deep rich color, Maroon also.

Mrs. S. M. W.—If you finish all your hard firing of Belleek before putting on your gold you will have no trouble with it. A medium fire brings out gold as well on Belleek as on French china.

J. H.—You will find many suggestions for a vertical treatment of various shapes in the March 1902 account of the N. Y. exhibit. We give such designs in every number and will continue to do so from time to time, of course you cannot expect to find the designs adapted to the very shape you wish to decorate—you will usually need to shorten or lengthen or otherwise change the design to suit the various forms. If you cannot find good conventional designs in KERAMIC STUDIO we do not know where you will find them. You can refer to every month of this year.

There is always a little danger in refiring old china that has been used, dark spots may come upon the surface but usually a second fire will remove them.

S.—To repair your pinks which were fired too hard use your pink strongly for a second fire or in some places use ruby purple—they will, of course, never look as well as if properly fired at first. The only thing to do to blistered color is to sand paper off as much as possible and retouch with color, it probably will still show somewhat—be careful not to use too much oil which causes blisters.



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KERAMIC STUDIO

Vo. V, No. 6

SYRACUSE NEW YORK

October 1903



AS the time draws near for the Fall Exhibitions and later for the St. Louis Exposition, it is to be hoped that the members of the N. L. M. P. are planning a choice, rather than large collection of their work to be exhibited and that they will be strict in their judgment in regard to their own work. Since the public is always more critical than ourselves, it would be a good plan to throw out anything we do not ourselves consider quite perfect. For a sale almost anything goes, at prices to correspond, but an exhibit of a club should be dignified and show some unity of thought.

The placing of exhibits should be in charge of some one who has good taste and judgment and is unselfish, having the good of the club at heart rather than her own advancement or that of her especial friends.

Each piece should be carefully labelled on the base with name, address and price, description of piece also, if possible, for the information of judges and the press; in this way any unfairness is avoided, for if the press committee have any personal dislike to one's work and pass it by without comment, it will attract attention in spite of the indifference of individuals, if the work itself is of sufficient merit, except in case of "write-ups" by those who really have no judgment and let themselves be told what to say. Praise from such a source would be of no value, as we take it that each one would prefer to have the *real* opinion of press and public rather than see in print simply a repetition of what themselves or their friends say of the work. After all it is our own personal opinion we value most and we look at our exhibit hoping that the enemy will not put his finger on the sore spot that we have tried so hard to cover. So it is the best policy to discard all pieces with sore spots, no matter what other good points they may have, then we will be judged strictly at our best and know where we stand.

The naturalistic work should be placed together as also the conventional decorations, and plenty of space allowed—it might also add to the general good effect to have plates, cups and saucers and table ware all shown together, and the bric-a-brac separately.

For the St. Louis Exposition an individual case is of course the best arrangement for those who wish to call special attention to their work. A collection of this sort is always likely to attract the attention of the judges and has also the advantage that one cannot then complain that one's work has not been given sufficient prominence. With so much work to examine, judges naturally are inclined to pass hastily over work to which their attention is not particularly attracted.

No one should be disturbed if overlooked in an exhibit of this sort, it is after all a matter of individual opinion and another set of judges or representatives of the press might think quite differently. As long as we know that our exhibits show our best endeavor we should be satisfied to wait till we, by good fortune or hard work, strike the keynote which will force attention.

The KERAMIC STUDIO Autumn design competition closes the fifteenth of this month. A few words of warning should be

helpful to those intending to submit designs: Read *carefully* the rules before submitting. Remember that a conventional study and a *design* are two different things. Miss Mason's wild carrot supplement in KERAMIC STUDIO for August, is a study of the growth of the flower and its general characteristics—when applied to a ceramic form it would become a *design*, as in her wild carrot bowl shown in the New York Society's exhibit.

The studies are to be enclosed with a line only as a panel or plaque. The designs are to be applied to shapes. In making these studies and designs remember to apply the principles of spacing and balance as explained by Mr. Froehlich in this summer's issues of KERAMIC STUDIO.

CHAUTAUQUA CRAFT'S VILLAGE

THE name Chautauqua has become almost a household word among the literary minded but it is a new infusion of life which is developing in this widely famed resort the movement which has resulted in the establishment of a craft's village within its walls.

Mr. Baker who is prime mover was ably seconded this year by Mr. Hugo Froehlich who had general direction of the art policy. The crafts village is as yet in a primitive state, a little group of sheds and tents, sheltering the necessary implements for furniture making, metal work, wood carving, basketry, beading, leather work, book binding, modelling and pottery. But often it is in these earlier stages of a movement that the most real enjoyment and enthusiasm is found. The teachers were all hard workers, skilled and enthusiastic and the work turned out both in quality and quantity much better than was expected on the start. Mrs. Froehlich's helpful spirit was felt in every department and her enthusiasm contributed greatly to the season's success.

The pottery, under the direction of Miss Lucy Perkins, was exceptionally individual, the native clays found about the village were very successfully used, the designs from old pots and jars, mostly Indian in character, being particularly suited to the medium. Mr. Walrath who was in charge of the wheel work, kiln and glazes, turned out some fine glaze effects. Mrs. Vance Phillips also was an enthusiastic worker in the little shed which constituted the pottery—in fact, this department owes much to Mrs. Phillip's energy. The year's work altogether augurs well for coming success.

Both pottery and porcelain, are produced from clay. But there is a distinction and difference in clays. What we usually denominate pottery denotes, first, objects made of minerals (generally clay) which is molded while soft and then baked until it becomes hard; second, a place where such objects are produced; third, the art and process of their manufacture. In a narrower and more customary sense, the word pottery is applied only to the coarser varieties of such objects; porcelain comprising the finer, translucent, or semi-translucent kinds. The clay which forms the chief ingredient of porcelain is kaolin. Kaolin is found in abundance in many places. Greenland, England, and many of the Southern States. It is found in great quantities in China, and its name is said to be derived from a hill near King-tih-chin named kao-ling, or "lofty bridge."



FLEUR-DE-LIS—NELLIE SHELDON

LAY in the background blending softly, the dark gray at the top, through a touch of Lemon Yellow, to the soft grey at the bottom. While the background is open, wipe out the flowers and most prominent leaves. Model the flowers very simply in the gray, the leaves and buds in Royal, Brown

and Shading Greens, with a touch of Meissen, dragging a little of the background color over the edges of the leaves and petals.

Second fire.—Go over the background with the same colors as used before. Strengthen the flowers and leaves which are most prominent leaving the others in the background.

A very thin wash of Lemon Yellow over the lower petals and a strong touch of Yellow Brown, Dark Brown on the tufts with the little lines in Royal Green.

Keep the edges very soft and let the restful effect of the grays be the most prominent feature of the study.

For the light gray use Rose, Ivory Yellow, Deep Blue Green and Dark Green. Dark gray, Ruby, Yellow Green, Dark Green, Deep Blue Green.

BASKETRY

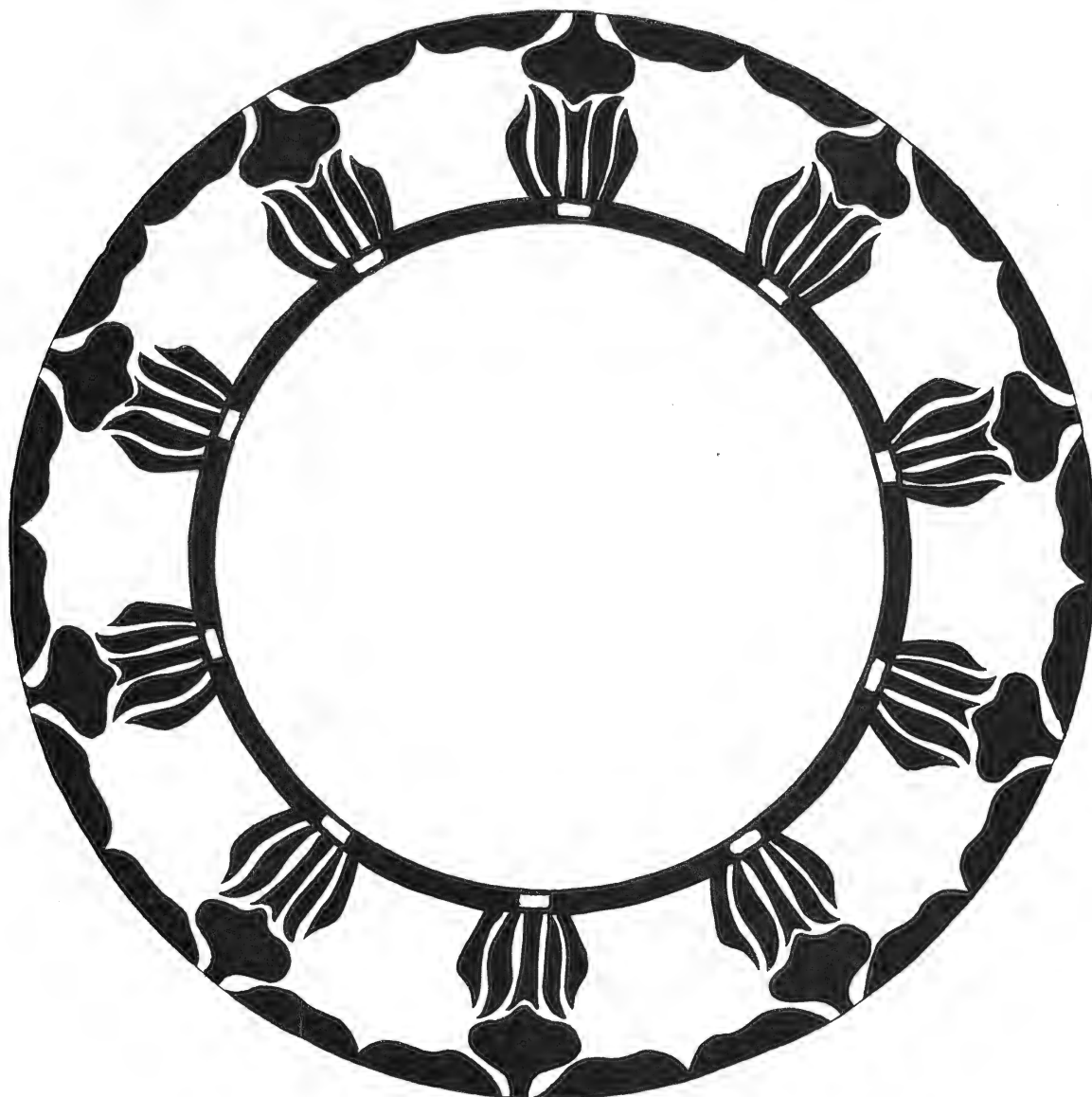
Mrs. Hugo Froehlich's article on Basketry, is unavoidably postponed until the November number.

TREATMENT FOR MARIGOLD (Page 130)

Lucia A. Soule

THIS flower is found in several varieties, the most usual being a deep yellow or a warm mahogany red with yellow under side of petal. For a conventional treatment several combinations are suggested.

1. Mahogany Red petals; underside Pale Ochre, leaves and stems, Grey Green. 2. White petals, Grey Green underside, and leaves and stems a darker Green. 3. Petals a Purplish Blue, underside Pale Apple Green, leaves and stems a rich Dark Green. 4. Petals, Yellow Brown, underside Cream, leaves and stems, Brown.



DESIGN FOR PLATE—CATHARINE SINCLAIR

This design is carried out in one color, Delft Blue (Lacroix). After the first painting dry very thoroughly in oven. A second painting will make a desirable shade and do away with two firings.

GRAND FEU CERAMICS

V—The Making of Ceramic Shapes—Gres and Porcelain
Throwing and Pressing.

*Taxile Doat*

HE handling of grès, and especially of porcelain, presents difficulties, which can be solved only by practice or with the help of a clever artisan. Pieces can be made by three different processes: *Throwing* and *pressing* for grès, to which should be added *casting* for porcelain. None of the details of this work must be neglected, as an omission or lack of attention may absolutely ruin the finished piece, although there may be nothing, before its passage through the fire, to show that it contains a destructive flaw, no more than a flaw can be detected in a steel bar before it breaks.

However one should not exaggerate these difficulties, as the mind gradually and easily gets used to the many precautions which must be taken during the handling of a piece.

When I commenced my experiments, I did not know how to throw, and I first learned to use the wheel.

Beating—When the soft paste has been taken out of the plaster basin it is necessary to beat it, in order to make it thoroughly homogeneous and to expel all the air bubbles, which may have been introduced during the first operations. In a ceramic body, the forgotten air bubble causes during firing a blister or a pin hole.

Formerly in factories the paste was beaten with naked feet, and now the work is done by machinery. As machinery is unnecessary for small quantities, one should beat the paste, as I do, with the hands.

The paste is divided into balls or masses of 15 to 20 centimeters (6 to 8 inches) according to the muscular strength of the operator. Then the ball is cut in two, either with a brass knife, or better, with a fine copper thread such as is used to cut butter (fig. 2). The detached part is lifted with both hands to the height of the arm and thrown violently on the other part, so that the two masses will penetrate each other. In order to increase this penetration, one strikes a few successive blows with the hands on the sides of the mass. This operation is repeated about twenty times, care being taken every time to oppose the sections to each other, until, when opening the mass, no air bubble can be detected.

During the beating, the hands must be kept, not wet, but damp, to avoid the formation of crust from the heat of the hand.

The beating of paste may be done, for grès, on a plaster slab 3 inches thick, and for porcelain it should be done on a slab of slightly porous stone, about 2 inches thick.

The slab I use is 25 inches long by 27 wide. Its surface is very smooth. It is solidly fixed on one side in the wall, and supported on the two other sides by a casing of bricks, laid flat, so as to insure their absolute fixity. The fourth side, or front, is open to leave free movement to the beater.

This paste bench must be kept very clean and carefully cleansed when one uses it for porcelain after grès.

Throwing—Throwing comprises *throwing proper* and *turning or finishing*. The tool to use is the antique potter's wheel. It is made of a vertical shaft turning in a cup fixed on the floor, the upper part being held by a collar. On top is screwed a plaster cap on the flat side of which the thrower places the paste. This cap is called the wheel top. Near the

base of the shaft is a large balance wheel, which the thrower pushes with the right foot to keep it revolving.

Everybody knows the potter's wheel. There are some in all cities in the world and it should be easy to all to become familiar with its working.

Throwing—To throw a piece, the thrower places near his hands an earthenware basin filled with a clear paste called slip. He puts the wheel in motion, throws with his right hand some slip on the wheel top, slides on that slip a plaster disc $\frac{3}{8}$ -inch thick, putting it exactly in the center, being sure that its center coincides with that of the wheel top, and this fixes it. As soon as the water of the slip is absorbed by the plaster, the disc will be fixed by itself and will form a solid basis. Then the disc is also covered with slip, in the midst of which the ball of paste is thrown and fixed.

Taking the mass of paste between the hands which he must keep constantly wet with slip, the thrower alternately raises and lowers it, pressing it between his hands, then between his fingers, pushing the thumbs into the center of the mass and opposing them to the fingers which are pressing on the outside. Sometimes with an effort, other times by a slight touch of the hands, he gives to the paste a heavy and thick shape, following as closely as possible the curves of the shape to be made.†

In the study of throwing the most difficult thing to master is the centering of a piece, which consists in making the center of the thrown piece exactly coincide with the center of the wheel top, so that there will be a synchronism of rotation of both. It took me three months and a good deal of patience to master this necessary detail. I advise to practice first with a plaster disc and successively with heavier and more important pieces. This point acquired the rest is nothing but an attractive play.*

Closed pieces, those with narrow necks, are thrown in two pieces, which after the finishing are put together and fastened with slip. This operation must be done rapidly and with precision.

Throwing is the most important part of the making on the wheel of a ceramic piece and its success depends entirely on the care with which it is done. Brongniart, in his excellent "Traité de Céramique" mentions all the precautions which must be taken. It would be too long to go over them in detail in these articles. The thrower will become familiar with them by practice. I will simply say that the less plastic a clay is, the thicker it must be thrown, and that it takes many years of practice to become a clever thrower.

Turning—When the thrown piece is firm, but not dry, it is

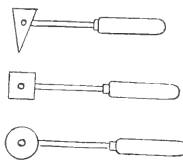
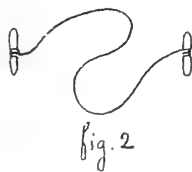
placed again on the wheel and glued with slip. Then it is perfected with turning tools. These instruments (fig. 3) are steel plates, sharpened on the edges with a file, straight or curved, solidly fixed in a wooden handle and perpendicular to the angle of the handle. With these different turning tools the thrower perfects all the curves of the vase, keeping as closely as possible to the design which he has under his eyes.

The piece is then subjected to the finishing process.

This consists in applying to the piece turned a steel blade with sharp edges, which has been cut with a file into

† [The plaster disc holding the shape is then cut from wheel head with a wire.—Ed.]

* [By pressing the paste firmly between the palms with thumbs over top and holding steadily until it no longer "wobbles" the clay will quickly center itself—the main thing is not to allow the hands to move from this fixed position until no motion is felt but the circling one.—Ed.]



the exact inside or outside outline of the model (fig. 4). The sharp edge of the steel removes the remaining excess of paste. This done the piece will be finished completely by polishing it with the angle of a horn leaf or with a wet sponge.

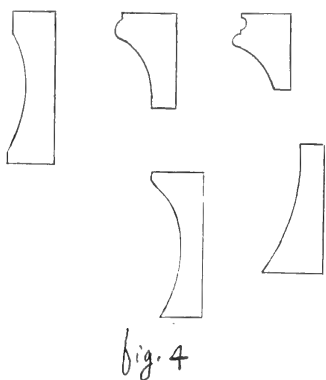


fig. 4

Pressing—Pressing is the mode of fabrication by which the soft, but well beaten and homogeneous paste, is vigorously pressed with the thumb inside of a plaster mould representing in hollow the shape which one wishes to make. It is important to put everywhere an even coat of paste, whether it is put in small flat pieces or rolls. One must also with a wooden chisel indent with light furrows the two parts which must be joined, and in order to obtain a perfect adhesion, the edges of all the joined pieces should be wet with slip. Without this precaution there would not be adhesion of all the parts of paste successively applied in the mould, and cracks in firing would result.

The pressing done, and after the paste has become firm, the piece is taken out of the mould. The drying should be slow and even to avoid warping. Grès requires more care in this operation than porcelain. Grès is placed on laths (fig. 5), made of wooden slats, so that the circulation of air will act on all sides. To do otherwise would be to take the risk of cracks and warping which would disastrously increase in the firing.

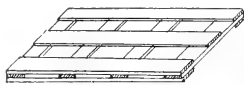


fig 5

The pressing process makes possible the execution in grès and porcelain of large pieces, in which the carving in high and low relief constitutes the main decorative element.

The drying and the firing of these large pieces are not without danger because of the shrinkage, this nightmare of the ceramist. To diminish this risk, it is well to mix with the paste, in the proportion of 20 to 25% a material, which, having already shrunk, will help reduce the total shrinkage. This material is a powder made of the same grès, fired and pulverised. (Called "grog" by potters. Ed.) With the help of this admixture Chaplet has executed plaques three feet in diameter, giving 2 feet 7 inches after firing. With the same process Bigot has successfully carried out a series of grès bath tubs made in one piece, and Jeanneney made in 1900 two enormous chimera 3 feet 11 inches high. The high relief medallion which figured in the architectural fragment exhibited by Sèvres in 1900 had 5 feet 3 inches diameter, was 25 inches in the thickest part of the relief and was made of this prepared clay.

As a certain number of pieces cannot be made in one block, they are made in parts, and the joining and adjusting of these parts is called cementing.

In order to make a good cementing, the constituent parts

of the piece should be put together dry, and when the adjusting has been well determined, furrows or hatchings are scratched on both surfaces to be joined, they are wetted with gum water and covered with a thin coat of slip, then it is cemented. Slip catches quickly and it is necessary to do the work promptly.

To render the cementing easier, its drying should be slow. This result is obtained by mixing with the slip a little gum arabic.

I do not think it necessary to go into more details for this part of the fabrication, as the makers of faience and common pottery are familiar with all its phases and can be referred to. Processes are the same with the new materials, but will require more care.



THE SUMMER SCHOOL OF CLAY WORKING AT ALFRED, N. Y.

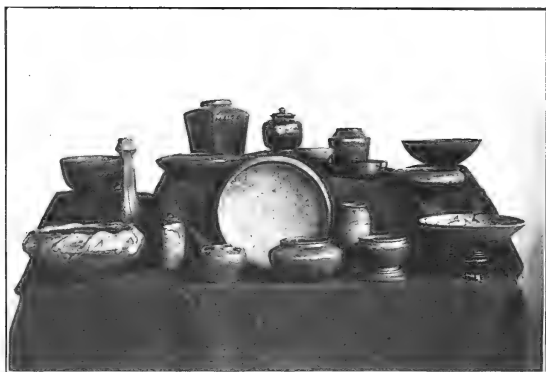
A MORE ideal spot than Alfred for the student of pottery can hardly be imagined. The atmosphere, physical and spiritual is most stimulating. The high hills, the bracing air, the peace and quiet, the large airy class rooms, every convenience for work right at hand and always some one to consult in a difficulty—what more could one want? The opportunity to do one's own work under the most favorable environments and a helping hand when necessary. The ceramic worker is immediately raised to a higher plane than the old familiar one of watching some one else do one's work, and the satisfaction of discovering one's own power of expression is worth a thousand "pieces to take home."



BUILT WARE IN MATT GLAZES, ALFRED SCHOOL.

That more students take advantage of this rare opportunity every year goes without saying, the success of the school is assured. Many overglaze workers of reputation are here to add new lustre to their names. Several different bodies were supplied, both white and colored, for the various processes of casting, throwing and building by hand, and glazes both matt and clear; while the student was guided in the mixing of his own materials, every possible convenience was provided both in laboratory work and in the mechanical processes, while Mr. Binns and his able assistants were always on hand to consult.

In Mr. Binns' laboratory classes thorough technical instruction was given in the composition of bodies, glazes and colors and the students worked out not only the problems given them but discovered many interesting mixtures which produced unique and original results. The forms designed this year show a steady artistic evolution. The Japanese influence produced many fine shapes of tea jars in thrown and cast



*BUILT WARE IN MATT GLAZES, ALFRED SCHOOL.

pieces and the Indian forms influenced much of the building by hand..

Mr. Fry's class in design was full of enthusiasm and many interesting originals were executed both over glaze and on a plate made at the school with a fine crackle glaze especially for this purpose. Later we will give an illustrated article on this class. Mr. Fry himself spent all his spare moments working in clay, with most interesting results.



GARDEN VASE—MARSHAL FRY.

Altogether the Alfred school is to be highly commended, there are, we believe but two other State schools provided with such facilities in the United States. This one has the advantage of being open for the summer season to those who cannot take the winter for study but can spend a vacation advantageously here and help the good work on.

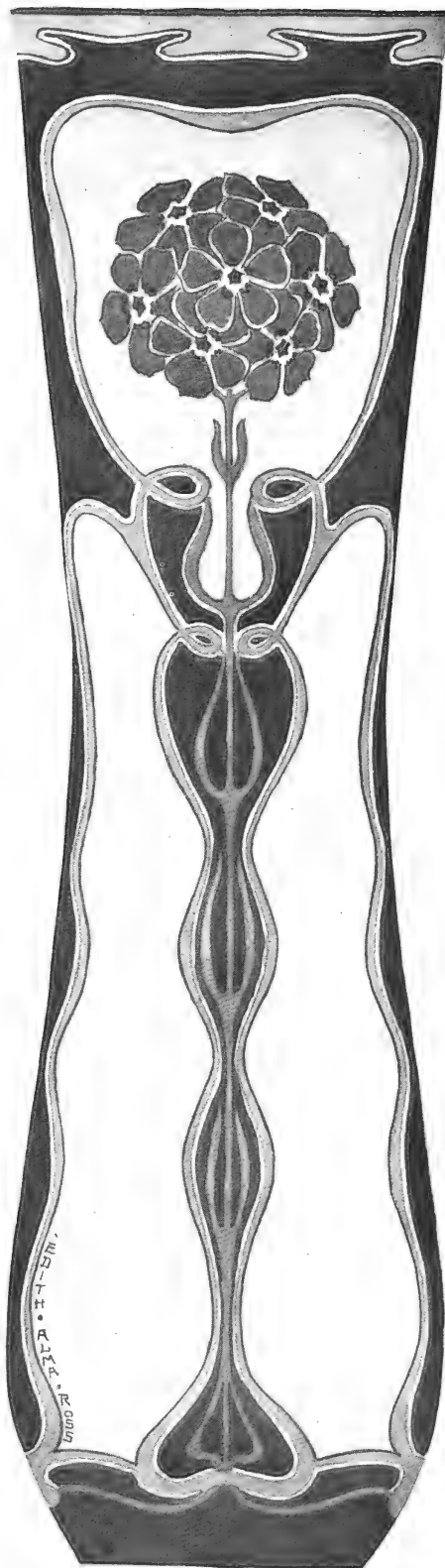
*Title under cut on previous page should be "Group of Tea Jars in Japanese Style."



TREATMENT FOR PHLOX

Edith Alma Ross

THIS design is to be executed in three shades of reddish violet, grey green and gold. Other color schemes are effective, especially grey, grey green and two shades of grey blue.



PRINCIPLES OF DESIGN

(Fifth Article)

Hugo Frochlich



N the July number of the *KERAMIC STUDIO* the meaning of the term *value* was defined as the comparative light or dark note that an object or space makes against its surroundings. For instance, a tree may in its entire shape be lighter or darker than the meadow against which it is seen. A vase may appear as a lighter or darker shape against a background. This lighter or darker quality is termed the value of the object and may be very slight, as the difference between two light greys, or it may be strongly pronounced as the value of a white object against a black ground.

For the sake of a good working basis we may divide the gradation from white to black into a *value scale* of nine steps, viz: No. 1 is white; No. 2, High Light, etc. This is a division made by Dr. Denman Ross of Harvard and is purely arbitrary. It is a convenient arrangement for the student and has the further advantage of corresponding to the color circle of full intensity. Of this color phase, however, more will be said in the future.

On analyzing this *value scale* we find that the grey which is just half way between white and black is called *middle*; and again half-way between white and middle is called *light*; while half-way between middle and black is called *dark*.

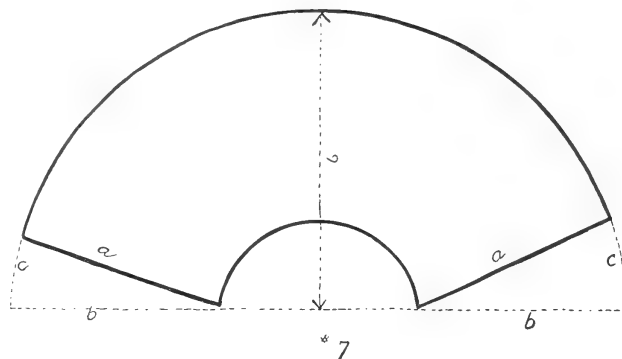
One step above *light* is *high light*; while one step below *light* is *low light*.

On the lower half of the scale one step above *dark* is *high dark* and one step below *dark* is *low dark*.

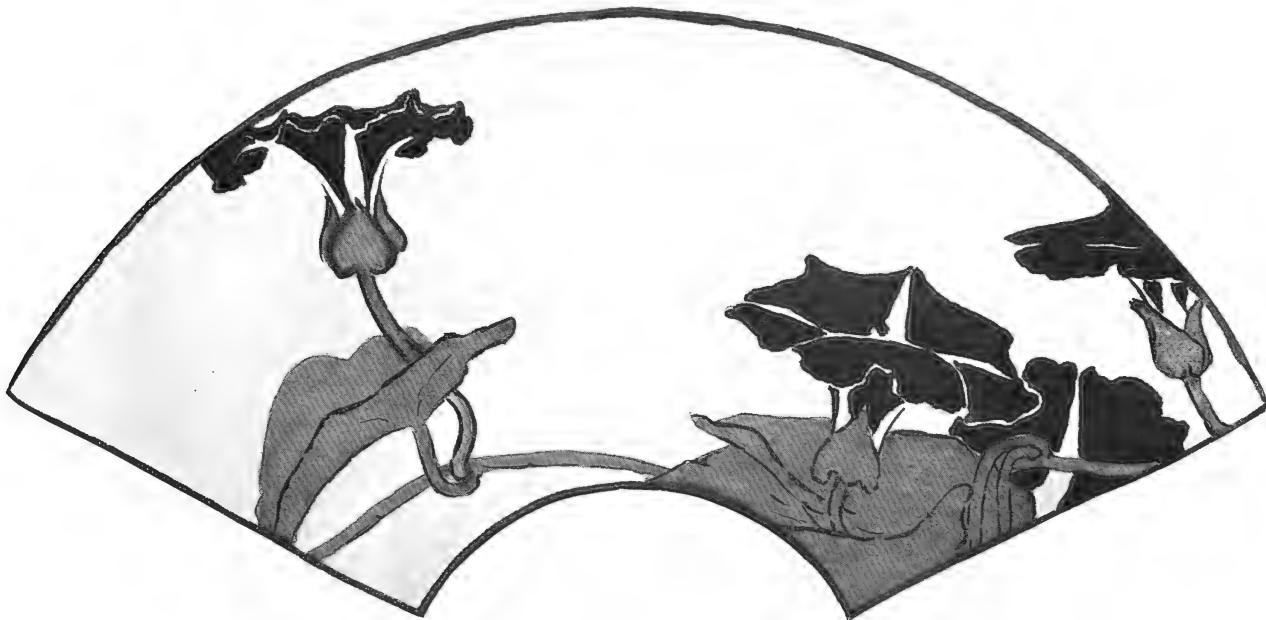
Try to learn this arrangement so that in referring to these terms you may readily understand their meaning. Roughly speaking everything about us will have a value almost coinciding with some note of this scale. If now we play on, say three notes above the *middle* or on three notes below the *middle*, we

are more apt to get harmonious results than if we play on notes that are widely separated, such as *white*, *middle* and *black*. I have given you in a previous lesson pure black or white because the terms (black and white) were limited. I wanted you to feel that a certain quantity of black would balance a certain quantity of white. If I had given you three greys of little difference in values you would not have realized this balancing quality in a large measure, hence the black and white spotting of a rectangle and border of the clover and Swastika motives. In the present lesson, however, we may try some of the more

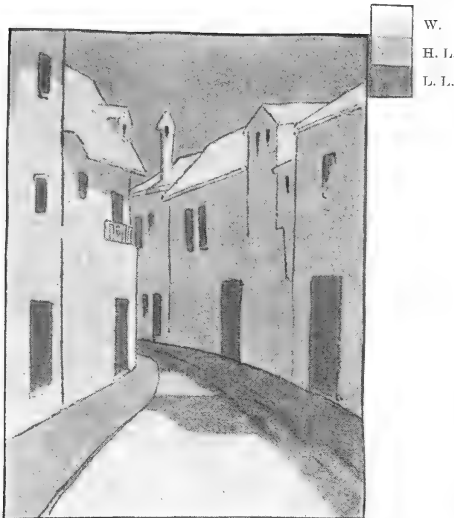
Problem II



subtle and harmonious arrangements. Harmonious here means likeness, viz:—if two or more objects, shapes or lines are like, there will be perfect harmony among them, if they have some elements of likeness there will be a tendency toward harmony. This is what is meant by shapes being related. In previous lessons the necessity of shapes or areas being related (harmony) has been emphasized as one condition of beauty. It has been stated further that this harmony may lie in the contour of an area (line or shape) in the value of the area or in the color of the same.



SOLUTION OF PROBLEM II BY A PUPIL.



Problem I—No. 2.

In this lesson we will consider the line and value. And so as to emphasize harmony of values we will try two problems, a landscape in three values above the middle and the same landscape three values below the middle.

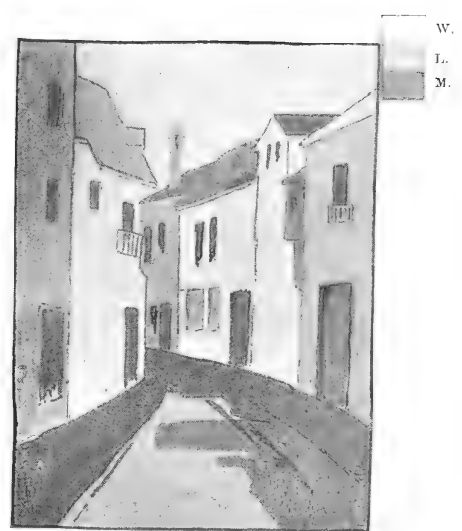
Here are four solutions of the same landscape treated according to two scales taken from the value chart.

See how differently the sketch appears under these conditions. Beauty has been attempted in each case. The instrument on which the visual tune has been played was chosen, one on the higher register, the other on the lower register of the value chart.

It is by such experiences as these that the mind gains insight into certain universal principles.



Problem I—No. 4.



Problem I—No. 3.

White
W.

High
Light
H. L.

Light
L.

Low
Light
L. L.

Middle
M.

High
Dark
H. D.

Dark
D.

Low
Dark
L. D.

Black

Problem I—No. 1.

This scale of color is all a half-tone lower than intended owing to the half-tone process.



Problem I—No. 5.

sketch until a fine arrangement is discovered, then copy the picture that is seen in the rectangle. Make four copies in pencil outline on some white paper (Japanese paper is preferred if it can be obtained, as its splendid working qualities are superior to other material).

These four copies are to be the same arrangement of landscape in four rectangles of same size similar to Nos. 2-3-4 and 5. Select three values from the value chart No. 1—above the middle these three values are to be the instrument for the first two sketches. Select a second instrument of three steps below the middle of the value chart for the second two sketches. Mix these grey values in separate saucers by using charcoal grey water color or any water color black pigment. Try to match the grays of the instrument; then paint in the shapes of the landscape similar to sketches 2-3-4 and 5. The gray tones in the landscape ought to be perfectly flat if the work has been done correctly.

Make two fan shapes by drawing a semi-circle whose radius is 6, the smaller circle to be determined by the student. Draw the lines a a and erase the lines b c. To make a fan shape whose proportion shall be fine requires judgment and such training as the previous lessons have given. Next step

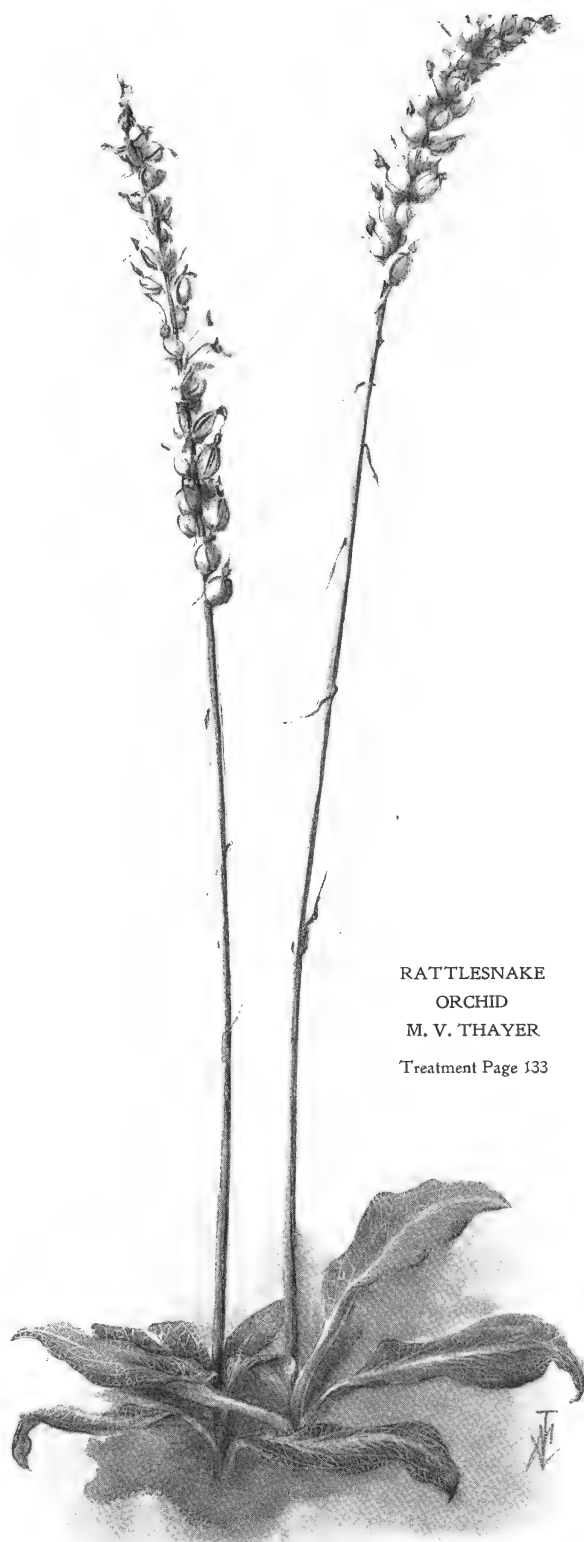


Problem II "8

is to compose in a big way some flower motive so that we have main mass, secondary masses; so that the lines or contours of these masses and the movement of the stems shall be related to or in harmony with the structural lines of the fan, which in this case are the two segments of the circles and the two ends of the fan. Try for the unusual in beauty, as any work that is no better than that of average ability comes dangerously near the commonplace. It must have something of ourselves, our personality, in its expression. It ought to carry with it a delightful surprise. The composition in both fans may be alike but they are to be spotted in different ways by playing on the following instrument.

By spotting them in different ways is meant that if in the first fan the flowers are of the light value, they may be of the middle value in the second, and if the background in the first fan is dark it may be light in the second, etc. Be sure to lay the gray values absolutely flat as that insures a refinement and excellence totally lacking in an uneven wash. The work as in the landscape problem may be done on white paper, however, the Japanese paper is preferable and ought to be mounted on a card board to insure the best results.

The object of the lesson is to further emphasize arrangement of parts in a given space, to develop consistency or rhythmic movement, to acquire a richer expression in values and consequently of colors, as value study is the foundation of color.



RATTLESNAKE
ORCHID
M. V. THAYER

Treatment Page 133



MARIGOLD—LUCIA A. SOULE (Treatment page 123)



OCTOBER, 1903
SUPPLEMENT TO
KERAMIC STUDIO

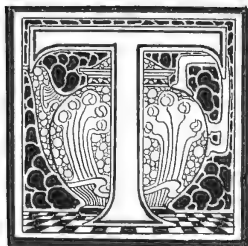
CRAB APPLES—LOUISE BLAKENEY

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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SYRACUSE, N. Y.

CLAY IN THE STUDIO

(Tenth Paper.)

Charles F. Binns

THE time has now arrived for the consideration of the problems of glazing and it is a matter for serious consideration how to put the necessary information before those who, presumably, have had no scientific training. All things considered it will perhaps be best to revert to the empirical way of doing things.

This is not the best teaching we admit but it affords the shortest path to results and if more is wanted some systematic instruction must be sought.

The ordinary glazes available for the studio will be such as can be mixed from materials which can be readily procured and which need no preparation. A glaze is a compound of fusible and infusible materials so balanced that at the right temperature the mass will melt and flow. The term "fusible" is, of course, relative. None of these substances is actually infusible but is so at ordinary temperature. Others again are very hard to melt when alone but fuse readily when certain other ingredients are present. For glazes so compounded the all-important substance is lead. White lead is generally used because it can be readily worked up in water but red lead would do the work. White lead supplies a base with which the other ingredients of the glaze freely combine and hence it forms an indispensable constituent of simple glazes.

For a lead glaze to fuse at cone 1, on the body already given there would be taken

White lead	73 parts by weight
Kaolin	8
Flint	19-100

This will give a very soft glaze, yellowish in color and somewhat inclined to craze on certain bodies. In order to harden or stiffen the glaze some of the lead may be left out and whiting or paris white substituted

White lead	62
Paris White	11
Kaolin	8
Flint	19-100

This glaze will also be whiter than the first and less liable to craze.

A still better glaze can be made by the introduction of zinc oxide but this must be added sparingly as it will impair the brilliancy of the glaze if used in excess. Zinc makes the glaze whiter and somewhat stiffer

White lead	54
Paris white	13
Zinc oxide	6
Kaolin	8
Flint	19-100

Yet another change may be given and as it will involve an entire change of proportions an explanation will be advisable. It is well known that the use of the materials which nature has provided is advantageous to the potter. Rocks and minerals are found which are already in a fused and glass-like condition and such substances are of the greatest use to the glaze maker. Many of these natural products are colored, they contain oxides of iron and manganese which are undesirable in water-white glazes, but feldspar is an exception. This has already been mentioned as an important constituent of the body mixture and it is also available for glazes. But the addition of feldspar necessitates a re-arrangement of the glaze by reason

of the fact that it is a complex substance. It contains potash, alumina and silica and would cause an excess of these were not the alumina and silica derived from clay and flint proportionately lowered.

The mixture will now read

White lead	50
Paris white	8
Zinc oxide	6
Feldspar	20
Flint	16-100

enough alumina being present in the feldspar the kaolin has been entirely omitted while the potash which the feldspar contains has displaced some of the lead and paris white.

One of these four glazes will probably answer the purpose of any one who is working at a low temperature but if it should be desired to make a change the lines upon which this should be done will be indicated. The important ingredients for stiffening are clay and flint, either one alone will not answer the purpose, they must be increased together and proportionately, the increase of the flint being double that of the clay. Thus in glaze No. 3 a harder mixture will be secured by increasing the clay to 9 and the flint to 21 parts and harder yet by making the clay 10 and the flint 23. This action may also be taken if a glaze is found to craze. The silica in clay and flint checks the crazing and the alumina prevents the silica having a bad effect upon the brilliancy of the glaze. At the same time these additions must inevitably make the glaze less fusible so that a stronger fire is necessary to secure maturity.

The materials may be secured from any dealer in chemicals and are usually found to be sufficiently pure. The kaolin, flint and feldspar which have been used in mixing the body are quite suitable.

The weighing being completed the whole mixture is put into a mortar and thoroughly ground. When all the lumps are broken down water should be added to produce a very thick batter, thin enough to flow down the sides of the mortar but no more. This must be again thoroughly ground to secure a perfect incorporation with the water. The worker on a large scale simply puts the whole batch into a mill and thus accomplishes what the less favored must do by hand. Labor must not be grudged at this point and let it be a consolation to know that the finest effects of the Japanese and Chinese potters are produced with hand-ground mixtures.

A fine sieve should now be brought into requisition and the glaze mixture thinned with more water poured on to it. Small clay lumps may be rubbed through but any grit must be rejected.

There are several ways of glazing pottery but only two in general practice. These are dipping and spraying. The latter need not be explained in detail as it involves the use of compressed air, the former is practised on two lines, porous ware dipped in thin glaze and non-porous in thick glaze. The former is the general factory method and is the more rapid but unless there be a large tubful of glaze it is impracticable. The porosity of the body renders a very rapid action necessary or too large a bulk of glaze will be taken up. Such rapid action is the outcome of long practice and is not to be attained without.

The non-porous ware then offers virtually the only possible course in the studio. To secure this condition every piece of ware to be glazed must be soaked in clean water until it has taken up all it will hold. The glaze must be of the thickness of good cream. So thick that when the finger is dipped into it a good white coating remains on withdrawal. It must be such a coating that cannot be shaken off. If the irregularities of the skin show through the glaze on shaking the finger the mixture is too thin. If left to stand for half an hour a

little clear water will be found on the surface and this can be poured away. While the pottery is being soaked let everything be got ready. All the preparations for drying should be made in advance. A small board on which to place the dipped ware, several stilts of different sizes so that the wet piece may not touch the board itself. An open window is a good place to dry on a fine day and the window sill should be cleared in readiness.

The glaze made of the proper consistency is contained in a bowl, an ordinary kitchen bowl is good, not too flat on the bottom because the glaze will not be deep enough, wide at the top that the pottery being glazed may be kept from contact with the edge. The bowl should stand on a low table, have the height so that one can work without stooping and yet have the work at arms length.

Now for the pottery. It is taken out of the water and set to drain. Then with a clean cloth every vestige of moisture is removed from the surface. It should be saturated but not wet, not even moist. The feeling it should have is like that of a brick after a shower of rain. If any moisture remains on the surface the glaze will run down in streaks. As each piece is taken up the best method of handling it should be considered. The fewer points of contact with the fingers the better. Small vases and jars may be held between finger and thumb, finger on the top, thumb beneath. Practice holding a piece so, and set it down on a stilt so as to release the bottom as it touches the support and to steady it with one finger only. It is surprising how even large pieces can be manipulated with just a single touch. The jar or vase being conveniently held is taken in one

hand and using the other hand as a scoop the glaze is ladled up and poured over the piece. As each handful is poured the piece should be shaken so as to throw off superfluous glaze and secure an even coating. It is sometimes easier to glaze the inside first, filling up the piece with glaze and pouring it out. Now when the whole has been evenly covered it may be set down carefully in the appointed place and left to dry.

When dry a test of thickness may be made by scratching the glaze with a pin. It is impossible to say what the scratch should look like but if every batch of work is thus tested a standard will very soon be reached by experience. The glaze when dry should be of the thickness of good writing paper. The scratch will heal over in the burning. When dry the pottery should be carefully lifted and the glaze at the bottom dusted off with a piece of cloth or sponged. This will prevent any adherence to the supports in the kiln.

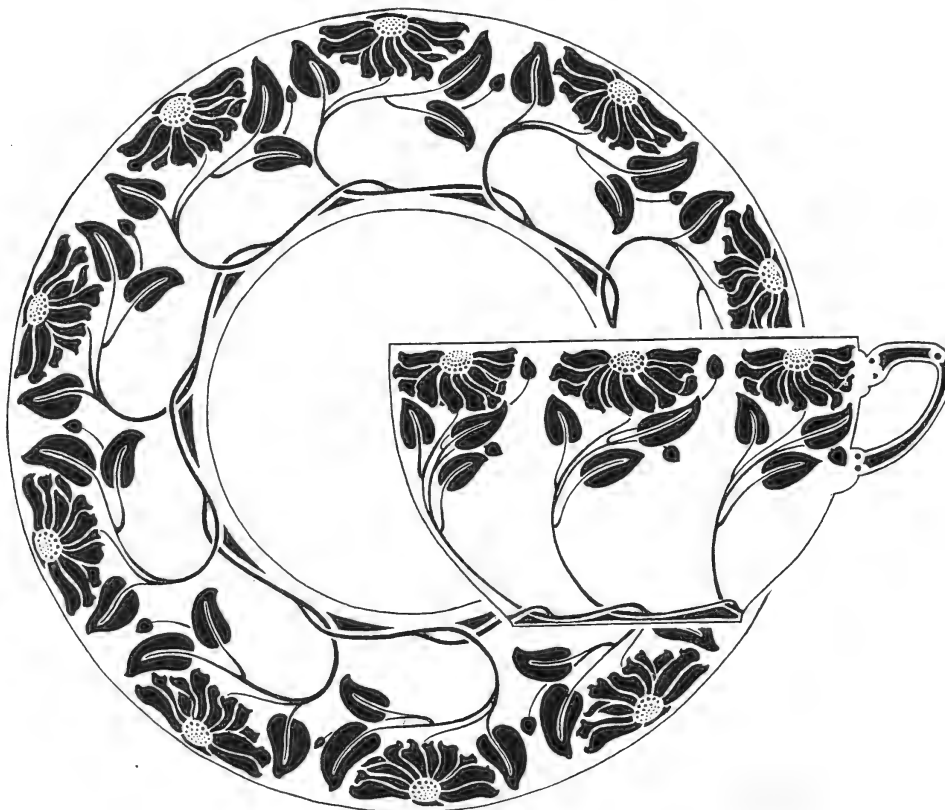


CHOCOLATE POT AND CUP AND SAUCER

Russell Goodwin

GROUND, cream tint, flowers, yellow brown, centers, leaves, stems and buds a medium light brown or olive green. Can be executed with or without outlines.

This design is effective in two shades of grey blue or blue and green on white or a grey tint, or it can be carried out in different shades of gold on a cream tint. The gold can be covered with lustre for second fire. If desired black outlines can be used.



CUP AND SAUCER—RUSSELL GOODWIN

TREATMENT FOR CRAB APPLES (Supplement)

Louise Blakeney

FOR the apples, use Lemon Yellow, Yellow Brown, Yellow Red, Finishing Brown; Copenhagen Blue for greyish blue. Use Albert Yellow and Yellow Brown for reflected lights keeping them brave and brilliant. For second and third painting deepen the shades with Yellow Brown and Finishing Brown, accenting with Auburn Brown for pips and about stems. Wipe out high lights in first painting, putting a touch of blue or blue violet close against high light, thus making it more brilliant.

For the leaves use Apple Green and a bit of Copenhagen Blue, thinly for light parts, Moss Green for yellower parts, Brown Green for deeper shades with accents of Dark Green. For stems use Copenhagen Blue for light greyish parts, deepening with Finishing Brown, accenting in second or third firing

with Auburn Brown and Violet of Iron. For background use Yellow Red, Blood Red and Violet of Iron running into greys; Finishing Brown used lightly and Copenhagen Blue.

The reddish and shadow leaves are put in with Violet of Iron, Yellow Brown and Moss Green.



RATTLESNAKE ORCHID (Page 129)

M. V. Thayer

THE rattlesnake orchid is quite as attractive in its winter form as in the summer flower. The compact spikes of dull white flowers have given place to graceful stalks of balloon like pods which are ribbed and lined like tiny umbrellas. The color is a light husk brown with red brown lines and shadings. The leaves keep all winter the fresh dark blue green color with the ribs of white sharply marked.



CHOCOLATE POT—RUSSELL GOODWIN



MARIPOSA LILY—MRS. E. L. HUBBERT



SOME OVERGLAZE DECORATIONS FROM THE CHAUTAUQUA STUDIO OF MRS. VANCE PHILLIPS.

CHAUTAUQUA STUDIO OF MRS. VANCE PHILLIPS

SUCH an attractive studio as that of Mrs. Phillips at Chautauqua is seldom seen. The rooms are large and airy, the windows are many and picturesque, shaded with vines or screened with awnings and the presiding genies are always bright and cheery. The spacious tables arranged for work, the finished pieces about the room, the flowers here and there, all create an atmosphere most attractive to china decorators in particular and every one else in general.

There is no doubt that Mrs. Phillip's figure work on porcelain is better known than almost any other, and always finds enthusiastic followers as here at Chautauqua and her enthusiasm in pottery work has greatly helped this department in the crafts village, where she takes many of her pupils to initiate them into the mysteries of the potter's art.

Mrs. Safford, who directs the decorative work and flower painting, has found some charming new effects this year in a semi-conventional treatment of roses, poppies or other flowers arranged about tall pieces with the stems running to the base here and there—not a mass or confusion of flowers but a few roses with their stiff thorny stems suggested or a few bright poppies with a shadowy suggestion of others in the background. Her panels in violets are charming and we note with pleasure that much of her flower painting is done on panels. The studio is very popular and surely its success is deserved.



The Guild of Arts and Crafts of New York, have just issued their circular for the coming season. Among the teachers we find the familiar names of Amy Mali Hicks, design; Dr. and Mrs. Busck, leather and metal work; Emily F. Peacock, enameling on metal; Mary Alley Neal, water color, and Mary White, basketry.

TREATMENT FOR MARIPOSA LILY

Mrs. E. L. Hubbert

THE dark flowers are light violet and are painted with Banding Blue and Ruby with centers of Brown Green, deep touches of Ruby around edges of center. Stamens a greenish yellow. The white flowers have the same centers and are shaded with Copenhagen Blue and Brown Green. Leaves of Brown, Yellow and Black Greens.

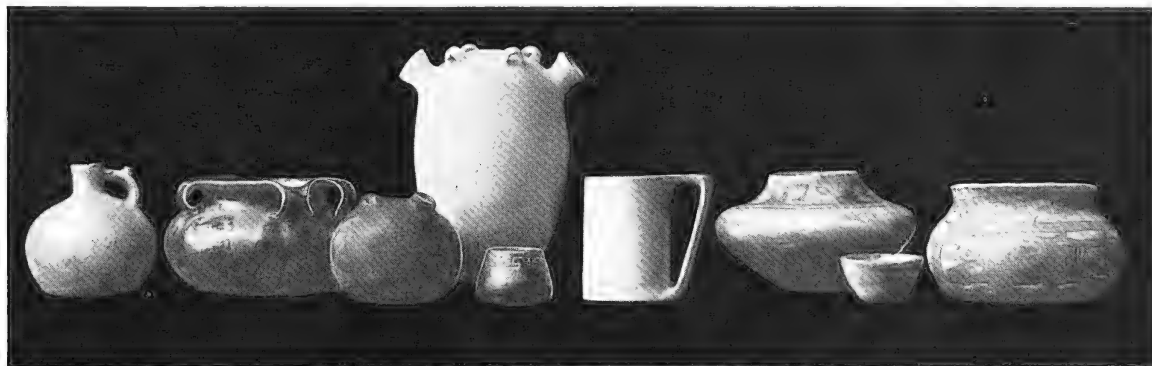


PEONIES (September Supplement)

TREATMENT IN WATER COLORS

Rhoda Holmes Nicholls

ONE of the charms of this study is the beautiful adjustment of color, the greys of the background balancing the warm tints of the flowers. The student should not slight the drawing, which although nearly obliterated in parts, is most suggestive and characteristic. The center of the peonies is Carmine floated in wet with a proper proportion of Rose Madder and Cobalt towards the edges, with a clean bristle brush model the inside petals by removing the color and as it begins to dry add the outlining of the petals. For the leaves use Hooker's Green No. 2, broken with Burnt Sienna and An-bucy's Blue. The shadow tones of the pink peonies are made with Burnt Sienna added to the Rose Madder. For the background use Cobalt Blue, Lemon Yellow and Rose Madder broken in. Then review the whole, strengthening the accents of dark and picking out the lights, being careful not to exaggerate either. To have a successful study keep the paper damp, the best means of doing this is to have wet blotting paper underneath.



POTTERY WORK FROM MRS. PHILLIPS' STUDIO.



BOWL—ETHEL H. LARTER

The black portion of this design is a dark grey blue, the lighter ground being a light tone of the same, the medium tone is a dull red. The entire design is outlined in gold.

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SIMPLE FURNITURE

III—CONSTRUCTION

Elisabeth Saugstad



HAVING considered in the last chapters, some of the laws and limitations of wood, and structure from the utilitarian and æsthetic point of view, we can turn to the more purely technical side of the subject. Wood is practically a straight grained material of a fibrous nature, splitting more readily in the line

of the grain. Consequently any form of construction which cuts across it in any part which bears a strain must materially weaken it, as in "bandy" legs, except in a very modified form. Therefore all parts should have the grain continuous from end to end, and in casework, especially, there should be members running the height, width and depth of the article.

Strains of compression should come on end wood, as legs of tables; and bending strains crosswise, as in drawers, chests or boxes.

Wood shrinks in width, not length, and this must be allowed for in roughing out pieces and provision made for it in the construction of panels, drawers, tops and all broad surfaces.

Furniture is divided into two groups, framework and casework. The first includes tables, chairs, beds, etc.; and the second all pieces cased or boxed in by panels, or otherwise.

The joints commonly used in the construction of either kind may be divided into three groups: butt, angle and framing joints.

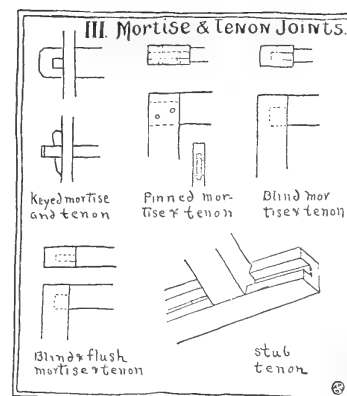
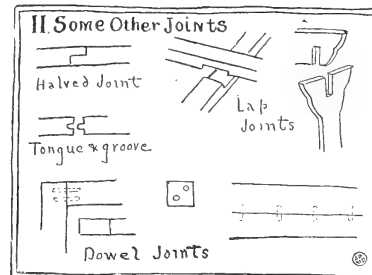
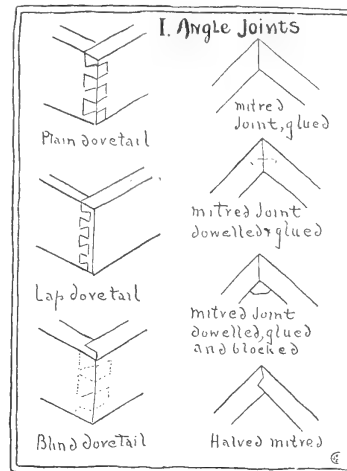
A butt joint is the fastening together of two pieces of wood on the same plane, as the boards of a table top. For such use it is strong, even when only glued, and practically invisible when the grain is parallel or carefully chosen to compose well. Blocks may be glued to the unexposed side for extra strength, having their grain parallel with the top so that shrinkage will be in the same direction. Or dowels may be inserted at intervals of from 6 to 10 inches. But in any case, the adjoining edges must be so perfectly true the whole length that no glimpse of light may be seen between them when one is rested on the other. Improperly fitted or twisted pieces forced together by means of clamps are almost sure to split later.

The mitred and dovetailed joints in III. I, and halved, tongue and groove and lap joints in III. II, do not need further explanation.

The mortise and tenon joint is an old and thoroughly good one, with several variations. The keyed mortise and tenon in III. III, is much used, and often without the slightest discrimination, on so much of the co-called "Arts and Crafts" furniture. It is supposed by many to represent the ideal of honesty and strength in construction. It may be used with picturesque effect on furniture of a very simple, unpretentious or primitive style, as a decorative feature, or to relieve surfaces that might otherwise be too bald. It is not, however, as good and strong a joint as some others for pieces which must be often moved, as the keys work loose; but it is perfectly satisfactory for pieces more or less stationary, as tables, desks or bookcases and built-in furniture.

The pegged mortise and tenon is also a good deal used and it is a good, strong joint; but the blind mortise and tenon is quite as good as either of the foregoing, and for the cabinet maker, usually better.

Each joint is good for some place and purpose which is determined by reason and common sense.



There has been much discussion concerning the relative merits of the mortise and tenon and dowelled joints, but in spite of some sentiment in favor of the former, which is so old and honorable, I have never heard a convincing argument against the dowel, properly used. It is very generally used; it

is much more easily and quickly made and in most cases I believe it to be as strong, and sometimes stronger.

Dowel wood, which can be bought at hardware stores, comes in round sticks about 3 feet long and from 3-16 of an inch to an inch in diameter. It costs about a cent a stick.

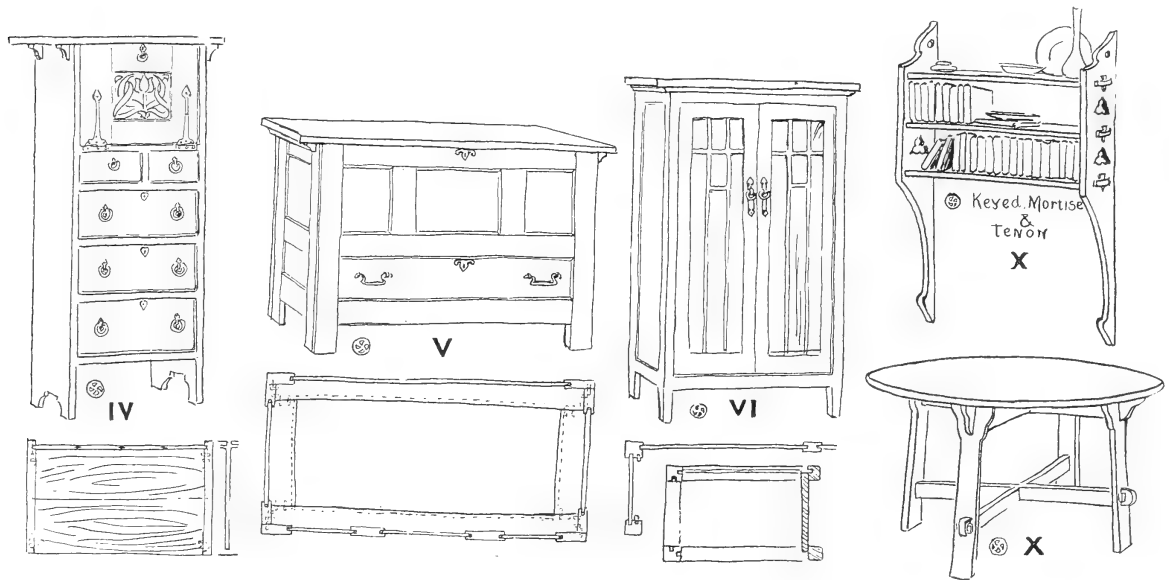
The pieces to be joined by dowels are made to fit perfectly, usually a plain butt joint, and corresponding holes are bored in them with a bit of the size of the dowel wood to be used. Dust and bits of wood are cleaned out of the holes and glue worked in them and on the faces of the pieces. The dowels are cut to a fraction less than the combined depth of the holes; the ends are trimmed by running around them with a sharp knife or bit of sandpaper. They are then inserted in one side and the other piece forced down on them and clamped together until dry.

There is a tendency among some craftsmen to look on the use of glue as objectionable and the resort of only the lazy or unskilled workman. This is not true, as it is a perfectly legitimate method of joining wood, provided the reasonable rules of construction are regarded. Two boards properly glued are more apt to split on the grain than where they are joined;

comes to be an eyesore and perpetual reproach. The whole article, unless small and simple, need not be put together at once, but, for instance, the back and front of a chair would be made separately and then joined together by the side rails and braces. The pieces should stay in the clamps until the glue is thoroughly dry, several hours or more. A dry day is best for glueing.

Another means of securing lightness with strength in construction, is by glueing blocks on the inside, as in corners or wherever it seems best to reinforce the structure.

In casework with panels, the uprights and rails may be joined together with mortise and tenon, dowels or tongue and groove as seems best in each case. A groove is run in the upright and rail for the panel, which should be able to work freely in it. It should be fastened in the center of the ends, so that shrinkage and expansion may be from that point and not from one edge to another. It should be about $\frac{1}{4}$ of an inch smaller than the place allowed for it, so it will have room to expand without bulging in damp weather. If the piece is to be stained, the panel should be colored before it is put in, otherwise there will be a light line if it shrinks.



and its use so strengthens a joint that greater lightness and grace are possible, and present use and convenience must often be considered before the solidity which outlasts generations.

Hot glue made fresh each time from flake or granular glue is best, but a good, ready made liquid kind, such as Le Page's, is satisfactory and saves time in preparation though it takes longer to set.

All joints must be perfectly fitted in every part so there shall be no strain or twisting of one piece from another when the whole is clamped together. The pieces should be warm and the glue applied warm, and worked well into dowel holes and mortise and spread evenly on dowels, tenons and all surfaces that come together, and it should be done as rapidly and neatly as possible. The pieces are then put together and drawn tightly with clamps, small blocks of wood being placed between them and work so it shall not be marred or dented. When it is necessary to bring close fitting joints together with a mallet, a piece of wood should be held against the surface to be forced, as it is almost impossible to get a dent out, and by far the best way is not to get one in. Every slip or carelessness of any kind

Ills. IV, V and VI shows some ways of framing casework. Ill. VII shows some ways of setting in shelves.

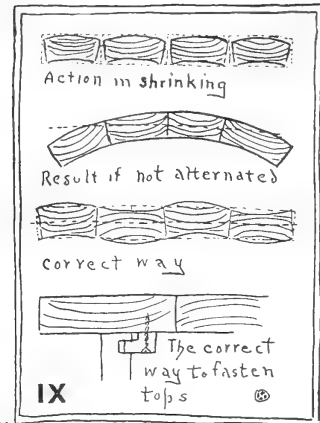
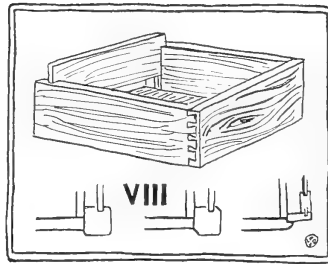
No. IV is a chiffonier of the simplest construction, the method being shown in the diagram. The partitions between the drawers are set in grooves and dowelled, the back is joined by dowels and run in grooves in the sides and fastened only at the top and bottom.

No. V is a chest with one drawer. The plan of it shows the method of building up corners where it is not desirable to have them solid. It is all dowelled together and the panels run in grooves.

No. VI might be a bookcase, a china closet or cabinet. The lower plan shows how it is framed with mortise and tenon joints and solid posts, and section of the bottom showing how it forms a stop for the doors. The other plan shows the framing of the panels in the side and back.

Ills. X and XI show an appropriate use of the keyed mortise and tenon, and, in the latter, the lap joint.

Ill. VIII shows how drawers are framed, the proper direction of the grain and several ways of setting them in the frame.

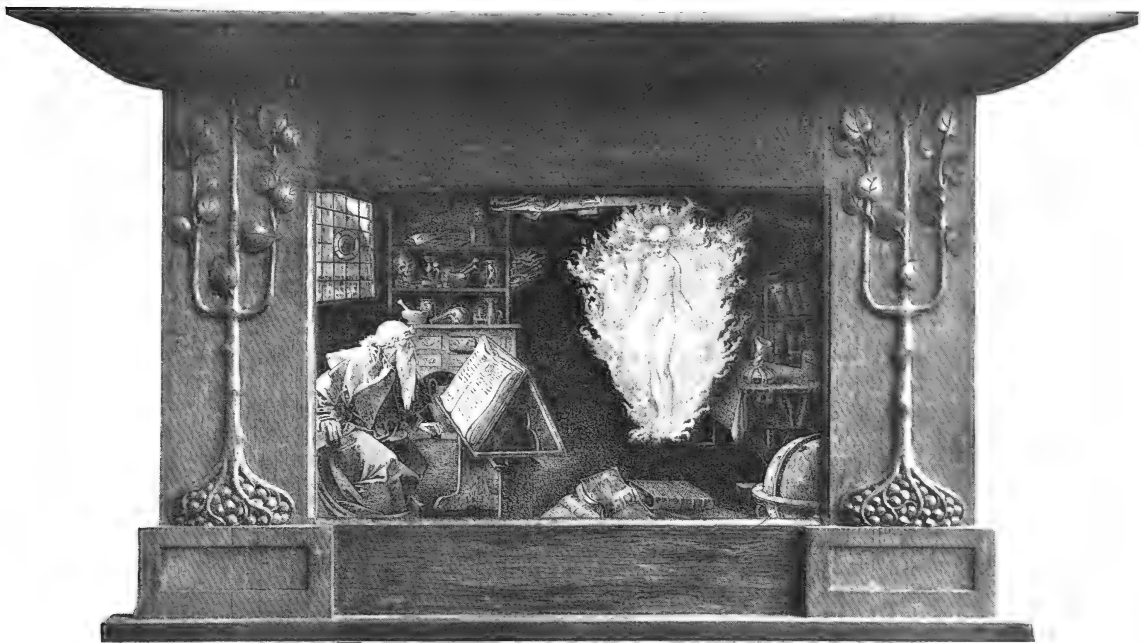


The bottom should be grooved only in the front groove. After they are fitted to their places, guiding strips, preferably of hard wood, are glued to the inside ledges; or in the case of a long drawer, it is better to put a hardwood runner on the middle of the bottom to run in a groove in the frame beneath.

In making tops for any piece of furniture it is not advisable to use boards more than 8 inches wide on account of the curving in shrinking of which I spoke in the last chapter. It is customary to alternate a heart side with a sap side so that the

curving will alternate and be more easily reduced because the general direction is the same. The diagram, Ill. IX is exaggerated to show the principle more clearly.

A top should not be screwed or fastened on tight at any point but the center of the ends, else it will either split, break the fastenings or draw the frame as it shrinks and expands. The best way is to fasten blocks at intervals to the top, each one having a tongue which runs freely in a groove in the frame as in Ill. VIII, thus it is held flat, securely in place but with perfect freedom.



FAUST AND THE FIRE SPIRIT—FREDERICK A. RHEAD

Design for Fire Place in pen and ink. Frame designed by Frederick A. Rhead and executed by F. C. Schmidt. Exhibited at Clarion Handicraft Exhibition, Chester, Eng.



PYROGRAPHY DESIGN FOR TRAY—OLIVE SHERMAN

PYROGRAPHY

TREATMENT OF TRAY

Katherin Livermore

BURN outlines; make a decided contrast between the inner and outer backgrounds; keeping the inner one very delicate rather than using the heavy lines indicated—a point stippling would be preferable. The outer one may be burned as heavy as indicated.

Use gamboge to color the flowers and Sap Green for the the leaves—put a flat wash on and when perfectly dry, shade the flowers and leaves very delicately with the hot point, using line shading; the effect of the burning over the color is very harmonious, but can only be done when water color is used.



ANSWERS TO CORRESPONDENTS

Mrs. G. F. W.—White wash or slacked lime reduced to the consistency of milk is applied with a large whitewash brush to the kiln.

Mrs. W. E. McA.—To use raised paste for gold mix the powder with just enough fat oil to hold it together, breathe on it (not blow) several times, mixing afterward with a horn palette knife. This gives a little moisture to keep the paste from drying too quickly, then add enough oil of lavender to make just a little thin, breathe on it and mix it until when you turn it over with the palette knife it stays "put." It is then ready to use; if it grows thinner with using and flats out, breathe again on it and turn it over till right; if it grows too thick, thin with more lavender and breathe on it till of right consistency.

Mrs. E. N.—A color that is dusted on is usually too heavy to take gold well, it is always the best practice to take out the color where the gold is to be used, with a fine pointed stick before firing. Then the fluxed gold can be used; a wet tint has not so much body as a dusted color and the unfluxed gold can be used to advantage over it without taking out the design. Why not try another make of gold and see if that will make a difference.

A. McG.—It is difficult to say just what was the trouble with your char-

coal kiln. We should imagine that in some way the draft was checked and gas or smoke entered the kiln—this would account for the whitewash being black. Possibly some of the other trouble might be due to accidents in painting and some to the firing.—if yellow disappeared, also pink in enamel, rose turned blueish, carnation a dirty color, the cause might either be an over-fire or some thing, color or dirt, getting into the painting from a brush not carefully cleaned or otherwise, but if ruby purple turned brown, it was either under fired or mixed with other color unless as before stated, all was due to gas in kiln. We can only suggest seeing that the draft is good and the kiln well warmed up before firing.

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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KERAMIC STUDIO

Vol. V, No. 7

SYRACUSE NEW YORK

November 1903



WITH great interest and curiosity we look forward to the coming exhibition of the New York Society which will be held at the Hotel Majestic, December 1, 2, and 3. So much study has been given by most of the members this past year to decorative design that we are confident of some remarkable results. But more than anything else the collective exhibit of the National League at St. Louis should show the exact status of decorative ceramic art. The *KERAMIC STUDIO* will do its best to give a full and carefully considered and illustrated resumé of this work soon after the exhibit opens at St. Louis.

The *Gate Beautiful* by Prof. John Ward Stimson, formerly Director of Art Education at the New York Metropolitan Museum of Art and at the Artist Artisan Institute of New York is an elaborate treatise on the principles and methods of what Mr. Stimson calls "Vital Art Education". It is profusely illustrated and contains much valuable design material. But the chief interest lies in the curious and mystical intermingling of philosophy and science with art. Certainly "*The Gate Beautiful*" is unique and well worth the reading.

Students in pottery, especially beginners, will find invaluable help and information in the articles we publish by Prof. C. F. Binns and by Taxile Doat. It will be our policy to keep in the columns of *KERAMIC STUDIO* a regular space for contributions on the subject of pottery making. Unfortunately very few books have been published which may be a practical help to the artist potter. However we recommend to beginners a recent publication which will be found listed on our Publishers page, the "*Handbook of Practical Pottery*," by Richard Lunn. Then there is a book, which is more for the advanced student, but will also be invaluable to beginners, it is "*The Collected Writings of Hermann A. Seger*," lately translated and published in English. These writings form a masterly treatise on the subject of pottery making and cover the whole field of the most recent discoveries in the composition of bodies and glazes, colored glazes, reducing and oxidising fires, etc.

The Fall Competition is closed but the decision cannot be announced before the December number of *KERAMIC STUDIO*, as the magazine goes to press before the decision is made. The work sent in shows a steady development and awakening interest all over the country. At the date of going to press designs had been submitted from England, France, Australia, British Columbia and Canada as well as from all parts of the U. S.

We quote from the "*Craftsman*" the concluding lines of a fine article on *L'Art Nouveau* by S. Bing, who gave the name to the new movement in decorative art and is one of its most remarkable supporters. We recommend the reading of this

article to those who confound the movement itself with the exaggerated and fantastic expressions which always accompany any new movement. *L'Art Nouveau* and "Arts and Crafts" are not so widely separated as many think:

"I have waited until the end to acknowledge that America has already furnished a contribution to the universal efforts of our times, which is now sufficiently noteworthy and valuable to merit for her the esteem of all friends of art. To limit myself to my personal knowledge, I shall mention men like the deceased archeologist Moore, like John La Farge and Louis Tiffany, whom the old continent would have been proud to possess, and I shall point to industries like the American manufactures of colored glass, the Rookwood and Grueby potteries, which have taken equal rank with the European establishments of similar character. But the branch in which the Americans have passed to immediate mastership is in the conception and execution of objects destined for practical use in household interiors. No designers have more clearly understood that the first impression of beauty, of the most essential beauty, emanates from every object which assumes the exact character of its use and purpose.

"I express the conviction that America, more than any other country of the world, is the soil predestined to the most brilliant bloom of a future art which shall be vigorous and prolific. When she shall have acquired, in the province of ideal aims, a consciousness of her own possibilities, as precise and clear as the confidence already gained in other domains of intellectual force, she will quickly cast off the tutelage of the Old World, under which she put forth her first steps upon the sunlit path of art. America, as I have already said elsewhere, has a marked advantage over us, in that her brain is not haunted by the phantoms of memory; her young imagination can allow itself a free career, and, in fashioning objects, it does not restrict the hand to a limited number of similar and conventional movements. America, taken all in all, is indeed only a ramification of our ancient sources, and consequently the heir of our traditions. But again, she has a special destiny, occasioned by the fact that she does not possess, like us, the *cult*, the *religion* of these same traditions. Her rare privilege is to profit by our old maturity and, mingling therein the impulse of her vigorous youth, to gain advantage from all technical secrets, all devices and processes taught by the experience of centuries, and to place all this practical and proven knowledge at the service of a fresh mind which knows no other guide than the intuitions of taste and the natural laws of logic."

ART NOTES

A little exhibition of recent work in silver and copper by Arthur J. Stone of Gardner; hand woven textiles from Berea, Ky., and examples of new glazes from the Merrimack pottery, are to be seen at the Society of Arts and Crafts in Somerset street, Boston.

The lace industry, which for more than two years has been conducted by the Society of Arts and Crafts and the South End House, is to be carried on in future by the lace-makers themselves who have formed a co-operative society.—*Boston Morning Herald*.



BITTER SWEET—MARY V. THAYER AND CHARLES BABCOCK

BITTER SWEET

Mary V. Thayer

THE *bitter sweet* is a most charming bit of fall coloring. The pods open only after the leaves are gone and the orange

husk breaks to display a lining of Naples yellow and the seed of deep orange red. The stems are inconspicuously grey brown. Done in browns with distant clusters half concealed by the background and the nearer ones intense in warm color the design should be as effective as a bit of Rookwood.



PERSIAN PLATE—EDITH H. LOUCKS

DRAW the design carefully in India ink, dust in the ground which may be either a dull red or blue. The design is of Olive green flat enamel edged with Yellow, made of Yellow

Ochre, a little Pompadour and Black. The borders of the Olive green enamel. The small flowers and leaves of soft blue and green enamel. Outline all of the design in gold.

GRAND FEU CERAMICS

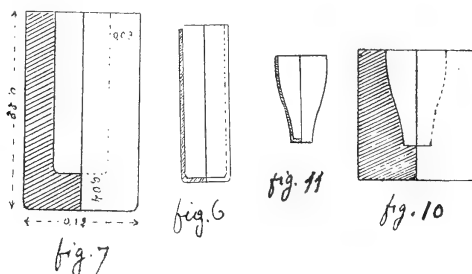
VI.—Casting

Taxile Doat



IN presence of the many difficulties of the various processes for handling paste which I have described, which difficulties are overcome only by special training and long practice, I decided early to adopt the mode of fabrication called *casting*, so as to obtain results more easily and surely. This process is very attractive. It is best suited to the work of isolated artists, because it does not necessitate an expensive outlay and presents no serious difficulties. It requires only attention and care. It is exclusive to porcelain, as it is not suitable to grès. In this way can be obtained at will, in various shapes, the smallest as well as the largest pieces, vases two inches or nine feet high, with fancy shapes like the Rosenberg or the Dresden wares, the thickest ceramics of Chaplet and of Bing & Grondhal as well as the thinnest egg shells of the clever Japanese. It is simply a question of moulds, which are costly and cumbersome only for large pieces.

On account of my modest resources and of the little leisure which my work for the State factory leaves me, I have confined myself to works of small and medium size. The most important of my cast pieces is the triumphal vase reproduced in the learned Encyclopedia of Ceramics of W. P. Jervis. It is 16 inches high.



With this process there is no need of learning to throw, beat, turn and finish the paste. The thickness is acquired mechanically with a perfect regularity. It is the triumph of the easy and the joy of the beginners.

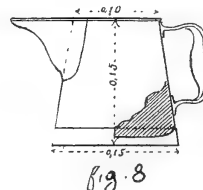
This mode of fabrication is based on the property which moulds in dry plaster possess of absorbing water. If in one of these moulds, the liquid paste called slip is introduced, the water will be rapidly absorbed, the paste will become firmer and will be spread uniformly over the walls of the mould, following all curves. When a sufficient quantity has thus been fixed on the walls, if the excess of slip is poured out, there will remain a coat of coagulated paste reproducing exactly the outside outlines of the piece and the inside of the mould.

For simple moulds, the pouring out is made through the top, by turning them upside down. For those of medium and large size, which are complex and heavy to move, the pouring is done through the bottom.

By following exactly the following explanations, anybody wishing to attempt grand feu ceramics, will become in a week familiar with the operation of casting.

Let us take as an example of a small piece, the casting of the two shapes, (fig. 6 and 11). The mould will be simple, as no projecting part in the shape will prevent the piece from coming out of the mould easily (fig. 7 and 10).

First, the slip, which has been passed through a screen No. 120, is prepared in a cylindrical pitcher with spout, having a large opening, so as to make cleaning easy (fig. 8), and containing at least double the capacity of the mould, or in a common coffee pot (fig. 9). The slip is gently stirred with a wooden spatula, in order, a very *essential point*, to expel all the air bubbles, to dissolve all the clods and make the paste quite liquid without excess of water. It is called *well prepared* for casting, when it is semi-pasty, that is, when it contains just enough water to make it fluid. If it has too much water, the slow time it would take for the water to be absorbed would be injurious. There is a happy medium which is left to the judgment of the operator.

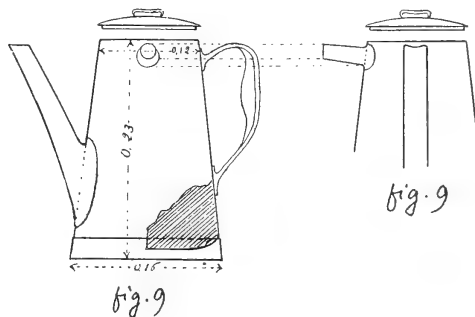


The slip is poured into the mould which is filled to the top. The absorption of water begins at once, and the slip which goes down gradually is constantly replaced so as to keep the liquid at a constant height in the mould. All the phases of the firming up of the paste can be watched easily, and when the thickness is judged to be sufficient, the mould is turned upside down, and the excess of useless slip poured out. One must carefully avoid jerks in this operation. During this pouring out, some slip is left on the edges of the mould. As soon as it is coagulated, it is taken out with a wooden knife or with the fingers.

Gradually the water is completely absorbed and the shape beginning to shrink, parts from the mould. The vase is made (fig. 11). The next day it is firm enough to be delicately taken out of the mould and put away to dry.

After using either the sun rays, or the action of a fire or of the wind, to dry the mould, the operation can be renewed. And the vases come out like cakes.

The disadvantage of the simple moulds which are emptied from the top, is that the least jerk will bring a deformation of the paste which is only firm, but not yet solidified.



If the shape to be made has one or many projecting parts which do not allow a simple mould, one out of which the cast piece can come by itself, one must use moulds in many pieces, which are emptied through the bottom (figs. 13, 15 and 20). This mode of operation is based on the physical law discovered by Galileo, that liquids tend to seek the same level in communicating vases.

In this case it is necessary to construct an apparatus,

which is not very complex (fig. 16) and consists of a tank A and a lead pipe B. The tank is in zinc, of cylindrical shape and with vertical axis. It is 27 x 12 inches. It is placed about 5 feet above ground, solidly fixed to the wall or resting on a table. The cylindrical shape makes easier the stirring of the liquid with a spatula in shape of an oar (fig. 18), which is moved from left to right. The bottom of the tank is in funnel shape (C) to make possible the thorough emptying of the slip, and it ends with a brass union (D), which connects it with the pipe. This pipe, which is 52 inches long by $\frac{3}{4}$ inch inside, is curved in its lower part and supplied with three copper faucets. The top one (H) enables the slip to flow into the pipe, the one at the other end (E) allows it to enter the mould, while the faucet in (F) is used to empty the apparatus.

The lower part of the pipe passes through a table (T) and the opening is on a level with the surface of this table. It is there that the mould (M), thoroughly dried out, is placed. On the table rests a circular plaque in zinc (Z) 20 inches in diameter, to facilitate cleaning (fig. 17).

In order to avoid the leaking of slip through the interstices between the mould and the table, a circular plaque of virgin beeswax (V) $\frac{1}{4}$ -inch thick, is kept around the opening (fig. 17), and is glued with wax softened by the heat of the hand. Even then it may happen that streams of slip will escape, and to make the closing of the mould absolutely tight, a long and narrow wad of fresh slip (R) is rolled and placed on the wax all around the opening of the pipe. The mould being placed on this wad flattens it and makes the closing perfectly tight.

Before placing the mould over the apparatus, it is absolutely necessary to ascertain that all its parts join well, and especially that they are very tightly tied with one or several ropes with solid knots. If these ropes were in the least loose, the pieces of the mould would come apart under the pressure of the liquid and the vase would be ruined.

The well tied mould is put in place. The slip which has been passed through the screen No. 120 is poured in the tank, and is left there to rest a little while. To be sure that all the air bubbles, these great enemies of casting, have been expelled, the outside wall of the tank should be sharply knocked several times with a stick of hard wood, such as oak. The air bubbles which may remain in the liquid then raise to the surface and burst. When one is sure that everything is in perfect order and in place, the casting proper is done.

The two faucets E and F remain closed. The faucet H is opened. The slip flows in the pipe and expels the air from it. It is necessary that not one bubble should remain in the pipe. Then the faucet E is opened wide. At once the liquid fills the mould. When it is just about to be entirely filled, the faucet H is almost closed, so that it will let in just the quantity of slip

necessary to replace that which is absorbed by the mould. When the thickness of the coagulated paste is judged to be sufficient, and it is easy to follow the progress of the thickening on the false rim, provided there has been no overflow, the faucet H is entirely closed, and the two faucets E and F opened. The

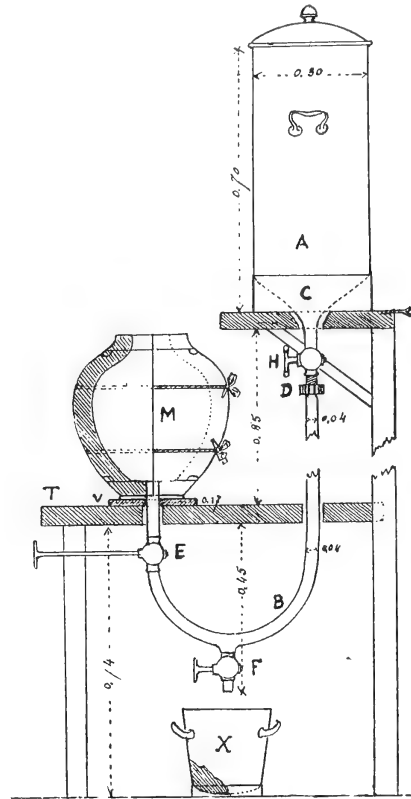


Fig 16

excess of slip flows into the pail X and both the mould and the pipe are emptied. The mould should be left to rest a good quarter of an hour, then with great care it is detached from the wax disc by lifting it, and it is carried without jerks on a table where it will stay until next day.

If the mould is heavy, it should be lifted with a tackle

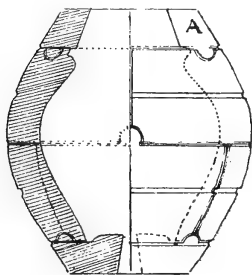


fig 13

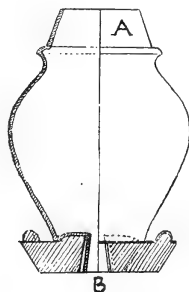


fig 24.

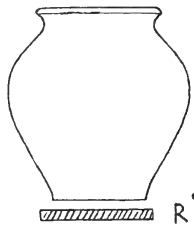


fig 12



fig 14

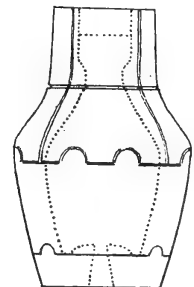


fig 15

block hanging from a swivel which turns on hinges solidly encased in the wall.

If another dry mould is ready the operation can be repeated until exhaustion of the paste. If there is no more casting to do, the faucet H is opened and the tank emptied in the pail. In this case the apparatus is immediately washed out with plenty of water, to avoid the settling of slip.

The mould containing the vase is carefully watched. If it is simple, the taking out of the mould can be delayed indefinitely. But if it is in many parts, the shrinkage of the piece must be watched. It should be taken out after from 40 to 48 hours. The first time the hours and minutes of the different phases of the operation should be carefully noted, so that the next casting can be done without hesitation. At the end of 48 hours, the ropes which tie the mould are untied and each part is taken out in a regular order, the cone of paste B which has formed under the vase is carefully broken off and the new born is placed on a plaster slab (fig. 12). This slab must be sprinkled with a fine sand, so that the vase will shrink on itself easily.

If cracks occur in some parts of the piece, it is because it has been left in the mould too long. If on the other side it is taken out too soon, the paste, not being sufficiently coagulated, will sink on itself. It is then very important to give the greatest attention to the time a piece should remain in the mould, and this time varies according to the composition of the paste.

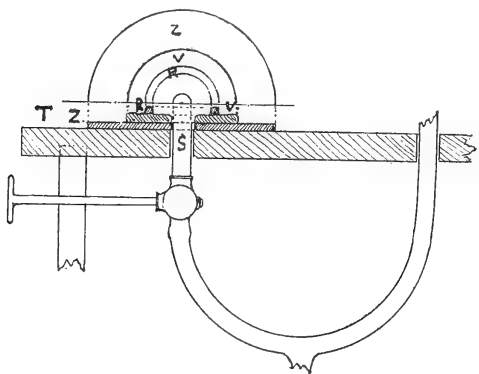


fig 17

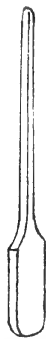


fig 18

While the operations of casting and taking out of the mould last, one should carefully avoid touching the newly made piece, because the least contact will invariably cause in the firing a deformation of the outline.

When the piece is thoroughly dry, it is finished on the wheel, and for this it is very useful to know how to use the wheel. If the shape is round a stroke of the turning tool will remove all the roughnesses and cut off the top rim which is called false rim. If it is of fancy shape the seams should be removed by hand with sand paper.

If it has been cast from the bottom, the opening at the base must be closed. To do this, this opening is rectified with the turning tools and made circular. Then in a plaque of paste of the same thickness as the vase, a disc is cut out of the same diameter as the opening to be closed. This disc is set in the opening, after all the parts which must be joined and cemented have been covered with slip. This operation has been described in article V (see cementing). As soon as the seams and imperfections have disappeared the piece is finished. There is nothing left to do but to decorate it.

With the paste PN specially prepared for casting by Mr. Frugier, the operation is done identically in the same manner, but there is the great advantage that the piece can be taken out of the mould *one hour* after casting. I use this paste for vases of eccentric shape, such as colocynths.

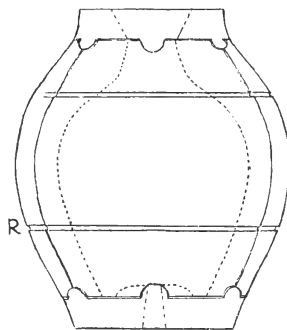


fig. 20

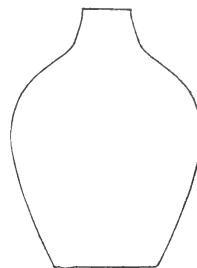


fig. 21

In a well made mould, it is possible with this paste to cast a coffee pot with its handle, spout and feet, in one piece, without any cracks, and in one hour's time. The paste should be prepared as follows: From 160 to 180 grammes of water are added to each kilo of paste such as is it received from the manufacturer. This mixture is well stirred and becomes a very fluid slip, which is passed through the screens 100 or 120. This paste will keep all its qualities only if it is shipped soft, such as it comes from the mill, and to keep it in that condition, it should be placed in a cool place, a cellar for instance, covered with a cloth which is kept constantly wet.

If casting is a much easier process than pressing and throwing, on the other side it requires much care, and also some knowledge about the making of moulds.

The plaster moulds which are used for pressing are essentially different from those used for casting, both in the way they are cut and in the preparation of the plaster.

For pressing (fig. 19) the moulds have generally horizontal sections, so that it will be easy to introduce the hand which must press the paste against the walls. Besides the different parts of the moulds are held by a chape C which makes it im-

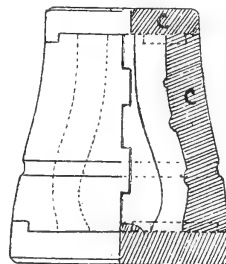


fig 19.

possible for them to move under the pressure of the hands. As the plaster must absorb very little water and also must resist the pressure of the thumb and other fingers, it must be hard. This result is obtained by a special preparation.

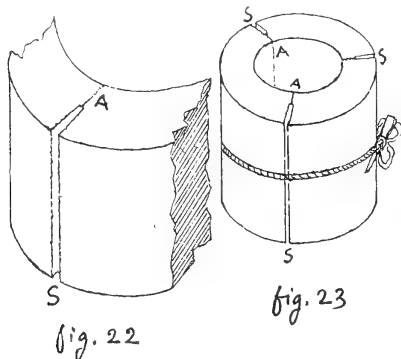
Plaster is said to be *made thick* when after water has been placed in a basin, the pulverised plaster is sprinkled in it with

the fingers so as to avoid clods, until the water is completely covered with it. Then it is beaten and left to catch. It becomes firm, hard and possesses only what porosity this matter always has. It is the ordinary preparation of plaster and suitable for pressing moulds.

But in casting, as the moulds must absorb promptly the water of the slip, they must be extremely porous. This excess of porosity is obtained by *making thin*. The operation is easy, but requires care and a little practice, as on the success of the mould depends that of the vase. The water is placed in a basin and the plaster sprinkled with the fingers as before. But this time the water should not be entirely covered with plaster. Before it begins to work, at the very time when it is going to catch, it is beaten and thoroughly diluted, then left to rest a few seconds, after which time a quarter of water is added, that is, a quantity equal to the quarter of the quantity used for the first mixture. It is well to measure this water. The object of this additional water is to delay the coagulation of the plaster, to prevent its hardening. Besides, lodging itself in the plaster, the water occupies room which after evaporation constitutes large and numerous pores. When ready to coagulate, the plaster is stirred again. It becomes then thick and pasty. It is in that condition that it must be used, but one must hurry up in making the mould or part of mould one is working on.

Casting moulds are distinguished from pressing moulds by the generally vertical sections (fig. 20) and by no necessity for the chape which holds the parts. For this reason they are less complex and less expensive. To be sure that the different parts of a mould will join well and will not move, grooves R are made with a gouge, outside, on top and bottom, if the mould is more than 6 inches high, in the middle only if it is smaller. In these grooves are solidly tied strong pieces of twine.

When a casting mould has been used many times, the seams on the cast piece have a tendency to appear rather large. To avoid this, moulds with split pieces can be made (figs. 15, 22 and 23). In this case the mould maker divides the mould in one or two blocks on which he makes with a saw a large furrow



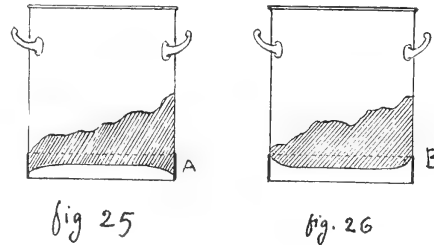
S, being about 4-5 of the total thickness. In this furrow he places the edge of a cold chisel and gives it a sharp blow with a hammer. The part A which has not been sawed is split and its section is capillary. However, moulds with this angular section require more attention in the manipulation of pieces.

All casting moulds have a false rim. This is an extension of the top of the piece to be made (figs. 13 and 24). The part of the mould where this false rim A is, holds the slip, the level of which varies with the successive opening and closing of the supplying faucet, while the top of the vase will receive a uniform supply of slip and will have the same thickness as the other

parts. The false rim in a cast vase must be removed only when the latter is thoroughly dry. It is taken off, either by hand with a very sharp blade, or on the wheel with a stroke of the turning tool.

Ceramic utensils must be entirely in zinc with tin solderings and if necessary copper rivets. Any particle of iron must be carefully avoided. If iron is not injurious to grès, it is most dangerous with porcelain. The plumbing must be in lead. If oxide of zinc and oxide of lead are formed they have no injurious action on porcelain.

These utensils must always be thoroughly washed after each operation, especially when two materials as different as grès and porcelain are used. In their inside construction all



angles, which are difficult to clean, should be avoided. So the pails instead of having a convex bottom like A in fig. 25 should have a concave one like B in fig. 26.

All tools and apparatus described in this article are those which I use every day. They are of my own design but have been constructed by Mr. Poyard, engineer, 48 rue des Cendriers, Paris.

The lead pipes must have no right angle, they must be everywhere of the same diameter, perfectly smooth, curved if necessary, but without any angles or asperities which would prevent the slip from flowing freely.

None of the details which I have mentioned must be neglected. They are the result of gradual improvements during a long practice of casting. By following them literally, beginners will avoid a good deal of trouble, expense and disappointment.

I will not speak of the casting of large pieces, the description of which would fill two long articles and would go beyond the object of this writing. I will simply say, as a matter of interest, that for large vases it is necessary to make a vacuum with an air-pump.

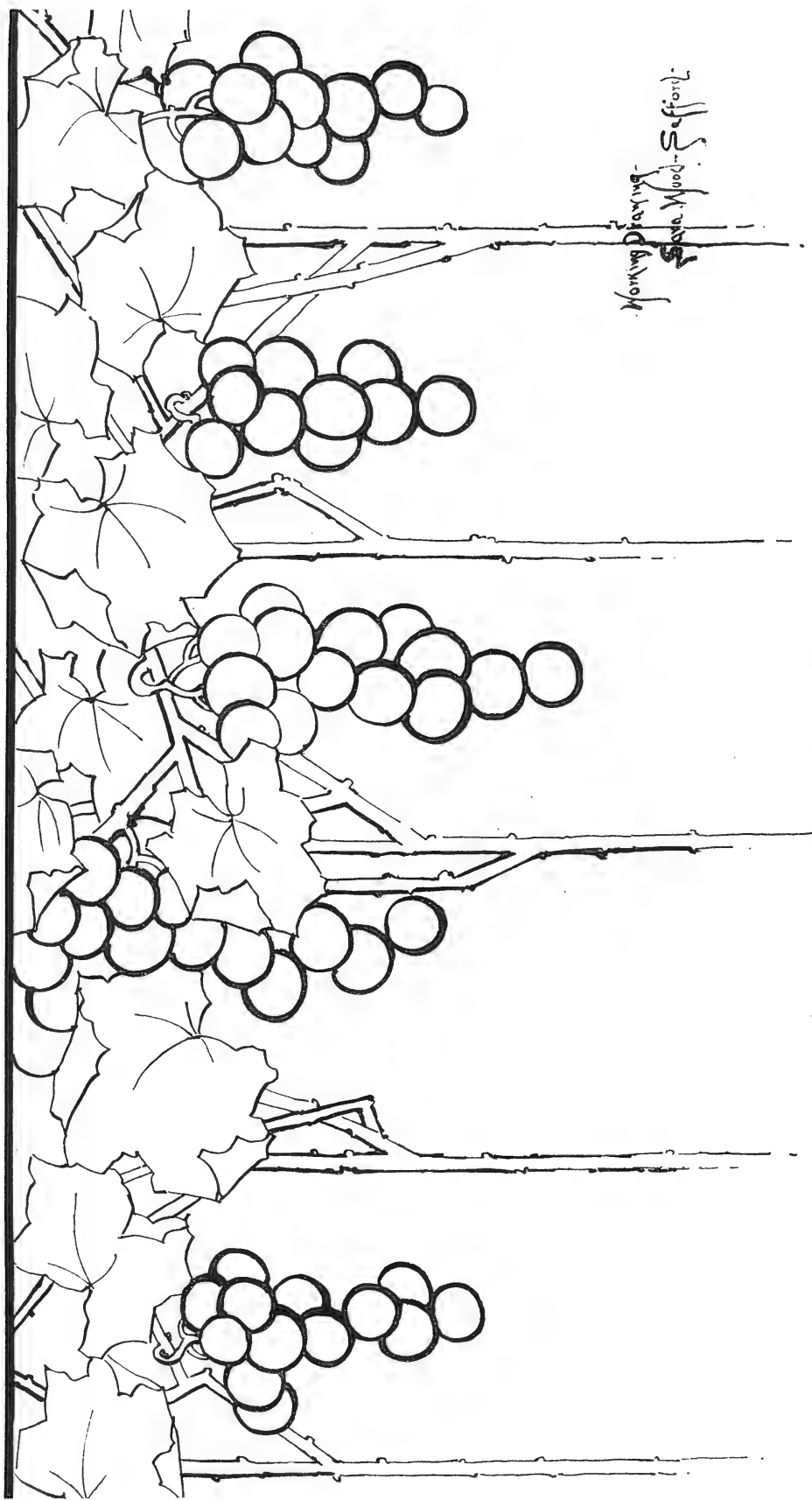
In conclusion I will advise the adoption of the paste PN Frugier for the porcelain pieces pressed and turned, and the special paste for casting PN for cast pieces. The same glaze will fit both. The fusibility of the cast pieces being somewhat greater they should not be placed on top of the kiln.

For cast pieces of large or medium proportions the ordinary paste PN can be used advantageously, the special paste being mostly useful for small pieces and fancy shapes which are not easy to take out of the moulds.

The first pieces obtained with this casting process will be the most powerful stimulus for the operator.

SCHOOL NOTE

'The School of Decorative and Applied Art, of New York City, is sending out a number of leaflets bearing on the course of study to be pursued this winter. Here as everywhere the arts and crafts influence is strongly felt and the winter's work will doubtless show a decided advance along these lines.



Working Drawing -
Sara Wood - Effort

WORKING DRAWING FOR SUPPLEMENT

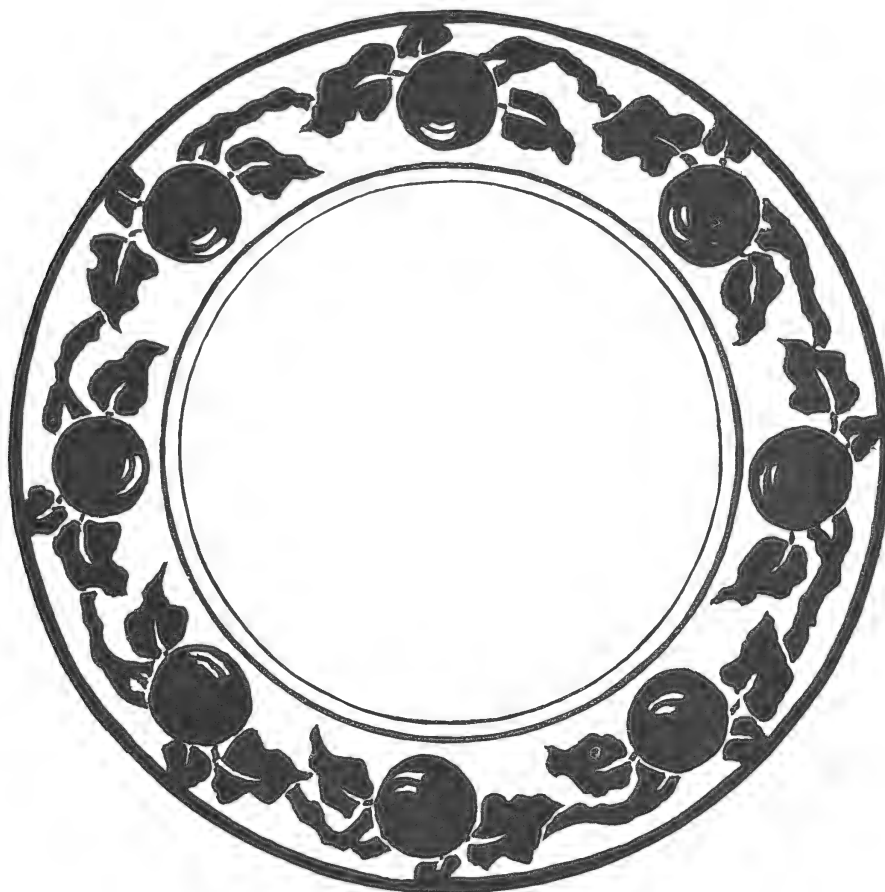
STEIN IN SILVER, ETC. (Supplement)

Sara Wood-Safford

FIRST draw in the design with black mixed with a sugar and water syrup—make the drawing carefully, and lightly. Be careful to leave no line or mark not desired in the finished work. Then apply the grounding oil and “dust on” the black, wipe out the design very carefully and paint in a soft wash of Carnation back of leaves and stems. The pink did not reproduce in just the tone desired. But carnation used thinly is the color which will give the effect obtained in the

made around leaves and stems (this time the color mixed with oil as in painting) and a line of burnish silver around the grapes giving a white outline effect. Another coat of burnish silver is applied to the handle.

Burnish silver will be found to work best if mixed with lavender oil and applied smoothly but thinly. If used too thick, it will seem to remain on top of the glaze instead of becoming a part of it. Even after the bright silver has been fired once, great care must be taken to remove all oily marks left from brush or fingers before putting into the kiln for other fires.



DESIGN FOR PLATE, TO BE EXECUTED IN DELFT BLUE—ADELINE B. LIENAU

original. In the second painting, the liquid silver is applied. care must be taken to have the stein perfectly free from oily stains or silver marks—wipe the surface over with lavender. Take fresh brush and fill full with silver and allow it to flow over leaves, grapes and stems. *Do not* go back and work into the silvered surface, thereby destroying the evenness and fine texture of your silver. A thin wash of the burnish silver may be applied to the handle for this firing. Clean the back surface carefully before placing in the kiln.

In the third and last painting a strong black outline is

TREATMENT FOR FOX GRAPES (Page 152)

Mary V. Thayer

THE fox grapes have a light color which comes from the heavy blue bloom. The stems and tendrils are also very light in color. The leaves at the time of the ripe grapes, are grey and frost bitten, sometimes brown and curled or even fallen. The berries are often smaller than peas and so sure for decoration in natural size where larger grapes would be out of place.



M

FOX GRAPES—MARY V. THAYER



NATIONAL LEAGUE OF MINERAL PAINTERS

IT is the expectation of the League to enter two departments in the St. Louis Exposition next year. A quotation from the circular of information, is interesting to the League, as this classification was secured by the untiring efforts of our former president, Mrs. Worth Osgood.

The quotation is as follows:

"The Department of Art of the St. Louis World's Fair has adopted a classification arranged upon a much broader plane than has been established by former International Expositions. In it is involved a recognition of the fact that there should be no distinction between what has commonly been considered as "Fine art," and "Industrial art." All work, whether on canvas, in marble, plaster, wood, metal, glass, porcelain, textile or other material—when the artist-producer has worked with conviction and knowledge—is recognized as equally deserving of respect in proportion as it is worthy from the standpoints of inspiration and technique."

On this basis the Committee makes the following report:

In the classification of the art works to be exhibited at the World's Fair, St. Louis, 1904, the commissioners have made it known in their circular that pottery and porcelain will be admitted to the Department of Art.

The jury for the selection of all works to be exhibited in this department will meet in New York in January, 1904, so that it is absolutely necessary that that portion of the League exhibit which is to be installed in the Department of Art, shall be in complete readiness by that time. In view of this fact, all members of the League are urgently requested to prepare one or more pieces to present to this jury. The decoration must be from original designs. The size and shape to be optional with the exhibitor.

As this is the first occasion that the Mineral Painters of this country have had the opportunity to have their work so advantageously classified and exhibited, it is hoped that the members will fully realize the importance of making an especial effort to have ready some really fine pieces to submit.

Due notice will be given of the time and place of collection.

MRS. L. VANCE PHILLIPS,
MISS ELIZABETH MASON,
MRS. W. P. HIBLER,
Committee on St. Louis Exposition.

The other branches of the exhibit will be drawn from the Comparative and Educational course adopted by the League, and will be installed in the Liberal Arts Building.

LEAGUE COURSE OF STUDY—COMPARATIVE

Jar No. 505, Ceramic Art Co.

Pitcher—selected from the League Competition of 1902-3. Plate 9½ or 10 inches—rim or coupe.

Decoration may be either naturalistic or conventional, but must be original.

EDUCATIONAL

Outline drawing of design for cup and saucer, particular attention being paid to the handle.

Jar—with or without cover; to be modeled, thrown or cast. With or without glaze.

Design for tile, 8 inches square, in black and white, water color, or on the tile itself.

MARY CHASE PERRY
Committee.

COMMITTEE REPORT

Concerning the pitcher which is being manufactured in Trenton for the members of the National League for use in the study course of 1903-4:

In last year's course of study, drawings were made for a "pitcher form". The one receiving the highest number of points from the jury was to be manufactured in china and to constitute one of the problems in overglaze decoration in the study for this year. It was so difficult to judge, from a flat drawing, just how a form would appear in the actual material, that it was decided that a clay model should be made in order that all points might be definitely considered. Therefore four of the best drawings were carried out in the actual clay, and Mr. Arthur M. Dow and others of note assisted in the selection and further improvement of the best one.

The first point considered was "proportion"—the width of the top and bottom and the height, also the contour of the sides. The second point considered was "practicality". The matter of "pouring well" was looked into, and the convenience, strength and line of handle were also studied. The pitcher was made to stand well, and thus conformed to the law that an article of utility must have so firm a foundation that it cannot be easily upset.

The handle was made to grow out of the construction of the form. Through it all the fact was not forgotten that the pitcher was to be decorated, therefore as simple and unbroken a surface as possible was desirable.

The Ceramic Art Co., of Trenton, are making the pitchers, and promise them to us before the last of October. The pitcher is of medium size, holding a little over a quart. The price has not yet been fixed, but they soon may be had from the dealers.

The League has gone to such trouble to place a really good form at the disposal of its members that it is to be hoped that each one will feel inspired to make a faithful effort to study out a suitable and beautiful decoration for it.

MARSHAL FRY,
Committee.

IDA A. JOHNSON,
President, N. L. M. P.

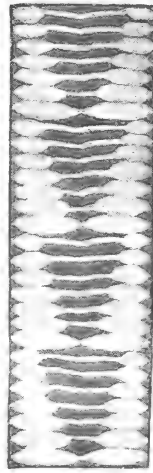
CLUB NOTES

The Brooklyn Society of Mineral Painters held its first fall meeting the seventh of October. The subjects for the season are: Arts and Crafts of the American Indians, November; Annual exhibit, December; National League course of study, January; Exhibit of work in League course, February; Decorative use of Color, March; Examples of color applied to forms chosen for League Exhibit, April; Important porcelains in the Metropolitan Museum, May.

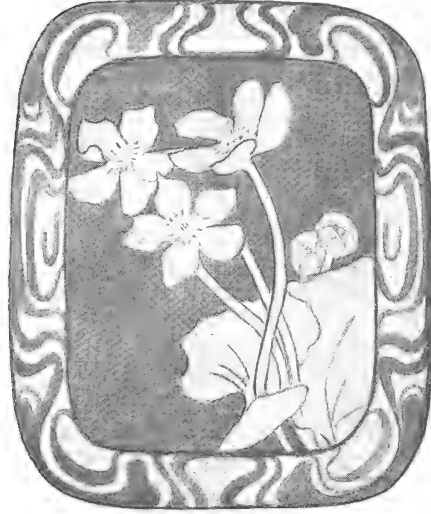
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The second meeting of the Kansas City Ceramic Club was held October 5, at the home of Miss Whitcomb, owing to the club rooms not being ready for occupancy. An interesting paper on the "Importance of a Good Foundation to a China Painter," was read by Prof. Huppert of the Kansas City Art School, and a practical paper on enamels by Mrs. Fuller. Next month the annual exhibit will be held, which includes the Loan exhibit, the exhibit of the National League of Mineral Painters, and the individual work done by members of the club.

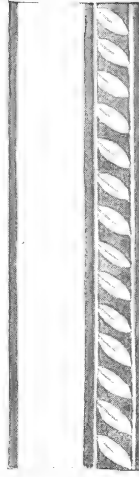
Mrs. W. G. WHITCOMB, Sec'y.



[J. H. RIETZ SWISSLER]



[LAURA HOWE OSGOOD]



[K. W. LINDSEY]



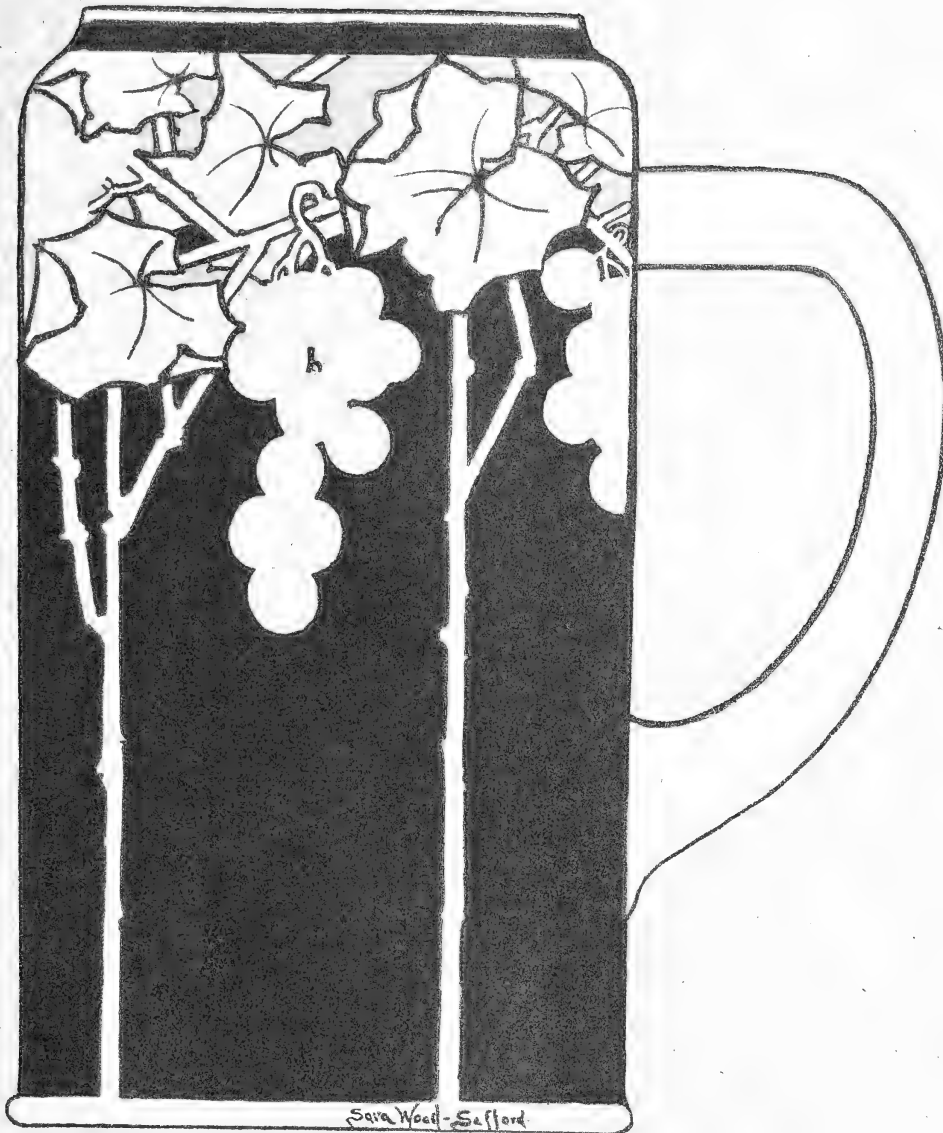
[OPHELIA FOLEY]



[K. W. LINDSEY]



[OPHELIA FOLEY]



CONVENTIONAL DESIGN FOR STEIN—SARA WOOD-SAFFORD

NOVEMBER, 1903.
SUPPLEMENT TO
KERAMIC STUDIO

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KERAMIC STUDIO PUBLISHING CO.,
SYRACUSE, N. Y.



DESIGN FOR PLATE—OPHELIA FOLEY

A SUMMER CLASS IN DESIGN

TO those who have known Marshal Fry so long, only by his charming flower painting, the work to which he is now devoting himself, will be a surprise and a revelation. At heart he has long had a leaning toward the conventional in ceramics, but has waited for the propitious hour when he felt he had gained the point where he could carry his pupils with him into pastures new, yet ever old—pastures ever existing and yet seen with changing understanding so that they are ever new.

Be that as it may, there is no doubt that the enthusiastic class that surrounded Mr. Fry at Alfred, lived in an atmosphere both mentally and physically most conducive to opening their eyes and understandings. The fresh air from the hills blew away the cobwebs from lungs and spirits, while the gentle

breezes from the heights of the ideal cleared out the cobwebs from heart and brain.

For the short season the amount of good work in design was certainly encouraging, some of it was carried out only on paper, but much was executed in color on the white china or on the plate made for this work at Alfred, and which was decorated both in relief and on the flat, with a fine crackle glaze which was developed this year at the School especially for this purpose.

The plate design by Miss Foley is fine and very suggestive of the Chelsea plate.

The card box problem was exceedingly interesting and brought some very fine results. The border of the card box by Miss Swissler is unusually fine though the center is rather commonplace.

The wave motif in the border of the marsh marigold design of Mrs. Osgood carries out the thought very well in a fine shade of grey green.

The work of Miss Lindsey is especially good in the center panels which are well spaced and spotted in an interesting way. Her workmanship also is very notable.

Miss Foley succeeded in finding the finest tone of blue color and the relationship between the blue and the grey is subtle and most pleasing. Her center panels are also rather more remarkable than her borders which have perhaps a little too much motion. The panel of Thorn apples is exceptionally good.

Much other good designing was done at Alfred but we have not the space to give it all.

Altogether the work is most unusual and most attractive. We are tempted to use an extract from a personal letter of Mr. Fry, as he expresses so well the thoughts we would wish to add in concluding our little sketch of this new class in design which promises so much for the future.

"Nearly all my pupils at Alfred came for regulation flower painting and it required some persuasion to get them started in the design class. When it began to dawn upon them what it all meant, their attitude changed. They realized that the exercises were beginning a development of faculties within. They found that it was not the much dreaded "conventional," the rearrangement of the forms in Historic Ornament. We trust to

nature for our forms, but the use we make of them in design is purely an expression from within, guided by the principles of design and composition. I was convinced of the advantage of classes over private lessons; the enthusiasm and atmosphere created by many minds together, concentrated on one idea, was inspiring to pupils and teacher. Some of the work done was so good in quality that it points encouragingly to what we may expect later on if the same spirit continues.

"I have been encouraged to feel that most of the opposition to the new movement comes from misunderstanding of what it really is, but when it is realized what it all means, and the delight of creative work is tasted and contrasted with blindly copying and helplessly depending upon a teacher, the battle is won..

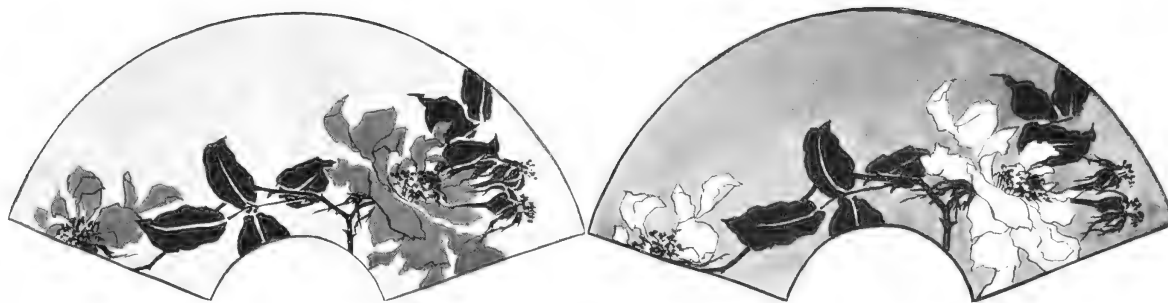
"Instead of the unlovely and commercial spirit which proverbially prevails in ceramic studios, we enjoyed an atmosphere of serious work and good fellowship, simply because our minds were concentrated on something good, life giving and real. Everyone was trying to develop his own faculties, and forget all about getting a great lot of pieces of teacher's work on china, to take home to exhibit."

With such leaders taking up the work of cultivating a love of the beautiful, and developing the creative instinct along ceramic lines, it will not be long before America joins the march of nations, with a distinctive decorative art, an art truly American and truly of our times.



CUP AND SAUCER—EDITH ALMA ROSS

The rim should be gold, the violets in two tones with a touch of red and yellow in center, leaves and stems a light yellow green; black outlines.



SOLUTIONS OF FAN PROBLEMS BY MRS. JOHN MAHOOD

THE CLASS ROOM

All subscribers wishing to follow the course of lessons on design by Mr. Froehlich, may submit their best three solutions of each problem to this department for criticism. We can not return work sent for criticism.

After working out solutions and marking them from 1 to 6 in order of merit not of making, select the best three of each problem and make copies, using brush and India Ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

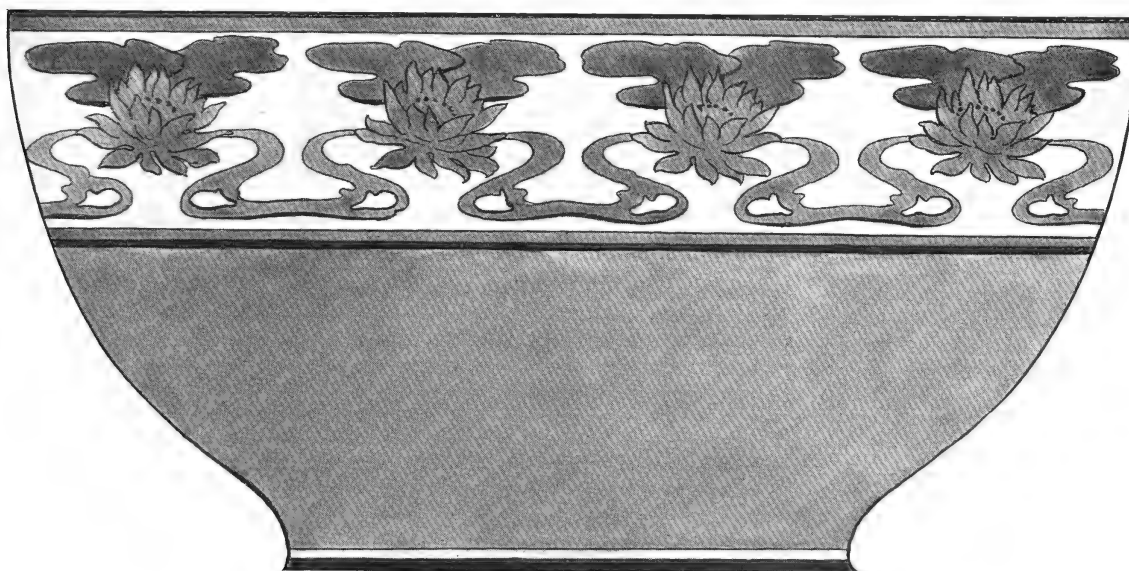
THE work in this department has grown to such an extent that it will be impossible to criticise designs further in the magazine, but criticisms will be sent direct to the students. A few of the best solutions of problems will be given to show the progress of the design class.

The solutions of fan problems by Mrs. John Mahood of Lynchburg, Va., are unusually good. The drawing is full of feeling, the spacing good, and the coloring harmonious and well balanced. The only criticism is that the upper space is touched almost in a straight line by the tips of leaves and petals entirely across fan, this line should be broken.

SCHOOL NOTE

DR. George Julian Zolnay the sculptor, recently appointed Superintendent of Sculpture in the Art Department of the World's Fair, has also taken charge of the Sculpture classes of the St. Louis School of Fine Arts.

Several new departments have been added to the curriculum, the most important of which are those of metal work, artistic bookbinding and pottery. Mr. F. W. Sandberg of Paris will give instruction in chasing, enameling and designing as applied to all forms of art industrial metal work. The book-binding department, conducted by Miss C. T. Baker, pupil of Cobden Sanderson of London, will include the entire process of fine binding. In the pottery school, which is under the direction of Miss H. O. Jones, the work will be carried through the stages of manipulation, such as turning and modeling shapes on the potter's wheel, firing, enameling, underglazes, cloisonné work, chemical experiments and above all special efforts will be made to apply figure and ornamental modeling to ceramic productions.



BOWL—MARIE CRILLEY

Use the design in gold and outline in black leaving the white china as a background. Some might prefer to use yellow brown lustre for the lower portion and dot the white spaces of design with gold. A pleasing color scheme for this bowl would be of green and blue flat enamels with dotted gold or plain white background, and gold bands. Solid tint on bottom of bowl.

WOODBINE STUDY

Mariam L. Candler

SKETCH in the design with India ink. For the Autumn tints use the following palette: Deep Red Brown, Vermillion Blood Red, Alberts Yellow and Copenhagen Blue

for shadow effects. Carefully model the foliage with clear, crisp, touches. For the berries use Violet of Gold, Deep Blue Green and a little Black. Light wash for first firing, strengthen and accent in the second firing. Carefully blend the design into the background, dusting on powders and glaze just before firing a second time.



DESIGN FOR PLATE—LUCIA A. SOULE

To be executed in Delft blue on a light cream ground or in flat gold on a cream tint. A flat enamel treatment in various color schemes would be interesting.



WOODBINE STUDY—MARIAM L. CANDLER

CLAY IN THE STUDIO

(Eleventh Paper.)

Charles F. Binns

HERE are several ways of placing glazed pottery in the kiln. "Placing" is the pottery term for setting every piece in readiness. A kiln of painted ware is "stacked," a kiln of biscuit or glaze is "placed." Whether saggars are used or not will depend upon the type of kiln. Probably most of our studio workers will not use saggars. Iron supports

in the kiln should not be used. If it is necessary to set more than one tier of pieces, earthenware supports must be made. This is the way to make them: Take the ball clay which is used in the body of mixture and crush it into very small pieces. Have two sieves, one with 40 meshes to the linear inch and one with 20 meshes. Sift the crushed clay through the 20 sieve and again through the 40. Save all the small pieces of clay which have passed through the 20 sieve and lie upon the 40. Put this granulated clay in a biscuit jar and burn it in the kiln. The dust that goes through the fine sieve will do for body mixing so that nothing is lost. The granulated clay, when burned, is called "grog." It will not soften down in water and is very valuable as a constituent of clay for props, bats and saggars. A mix is now made of half ball clay and half grog worked up with water to a plastic mass and from this the props are made. These can easily be built by hand. They should be nearly solid but it is better if they are not quite so. A mass of the clay can be rolled around an iron rod or stout wire and when the wire is withdrawn the hole allows the escape of moisture and prevents the piece splitting. These props must be cut to exact heights if they are to be used in sets. Bats can be made from the same clay. The clay is well kneaded or "wedged" as potters say, and rolled out to a uniform thickness. For small bats $\frac{3}{4}$ of an inch is enough, large ones must be made thicker. Both props and bats should be well dried and burned in the kiln before they are used.

Glazed pieces may be placed on stilts or directly on the bats. If stilts are chosen pains must be taken to get an assortment of sizes so that every piece may be set securely on the three points. Sometimes a small vase is placed on the arms of a large stilt instead of on the points of a small one, this is almost sure to result in pieces being pulled out of the foot where the glaze has cemented the stilt to it.

If there be a difficulty in procuring stilts to fit, small discs may be made of the prop clay and set under the vase. These discs need not be burned first but they must be dry. If it be decided to set the ware directly on the bats they must be protected with an infusible wash. Equal parts of kaolin and ground flint, worked to a slip, may be painted on the bats with a large brush. This coating will peel up when burned and will help to absorb any glaze which may run down on the foot of the vase. A bat should always be set on the bottom of the kiln, for an expensive kiln may easily be ruined by an escape of glaze. The glaze should be so compounded as not to run but there is always the liability of accidents, besides, some beautiful effects are secured with glazes which are intended to run.

In placing the kiln a space should be left for the cones. It is well to use three or four in each burn. For a temperature to reach cone 1 there should be used, say, one each of 06, 03, 01, 1 and 2, the first named are to give warning, they will bend perhaps one hour before the finish, cone 2 is the safeguard.

It may happen that No. 1 goes down unexpectedly and No. 2 stands there to show that no harm has been done.

The burn should be arranged to finish in the evening and the kiln should be resolutely left unopened until the following morning. This may conduce to early rising but no matter.

It is scarcely likely that the first few kilns will be faultless. Troubles are bound to arise. Not even the most experienced potter is free from them. A few of the most likely will be here enumerated and some suggestions made for their cure:

1.—The glaze is crazed. One is not long in the ranks of clay-workers without becoming familiar with this trouble but inasmuch as one is frequently asked "What do you mean by 'crazed'?" a word of explanation is given: The "craze" is a form of crackle. Small cracks develop all over the glaze but do not penetrate the body. Or long lines show themselves, often running completely around the piece. In wheel made pieces these lines frequently follow the spiral lines of the clay. Crazing does not always occur at once on drawing the kiln, sometimes it does not develop for months or even years. It is a troublesome fault and one of which potters have great dread. There are several causes of crazing and, of course, several cures. The cause may, first of all, lie in the body, it may be short fired. If a harder fire can not be given it is best to try and remedy the glaze. Some changes have already been mentioned in connection with the recipes given. Briefly, an increase in the flint will tend to cure crazing and is the simplest course to pursue.

2.—The glaze is marked with "pin holes." This is mainly a body fault and is caused by small air bubbles beneath the surface of the clay. They are not seen either in the clay or the biscuit but the glaze eats into them and shows them up; the remedy is to free the slip or clay from air bubbles. Pin holes are also caused by the body being too vitreous. Sometimes the fault is in the fire, the kiln being cooled too quickly will cause pin holes in the glaze.

3.—The glaze is blistered. This is a much more complicated matter, fortunately, however, it does not often occur on artificially mixed bodies. Natural clays are subject to it and the shortest way out of the difficulty is to consult an expert. It is largely a matter of chemical constitution.

4.—The glaze is scummed or frosted. Here again are several causes. A piece may have been placed close to an unglazed wall or prop and the glaze has passed off in vapor, being absorbed by the biscuit surface. The effect of this is seen in a wrinkled, skin-like appearance. Or the glaze may be short fired, or over fired—the softer parts being volatilized. Scum may also be caused by a leak in the kiln wall. If a blast of air or smoke falls upon a glaze it will almost surely spoil it. The cause can usually be detected from the fact that exterior causes have an appearance different from that produced by composition. If one side of a piece has the trouble and the other side is good the cause is surely local. If the whole glaze be uniformly damaged the cause is probably constitutional.

5.—The glaze is shivered, even to the extent of bursting the pottery. This is the opposite of crazing and can be cured by working in the opposite direction.

If any of these troubles occur and they are familiar to all clay-workers, it is not well to jump at a conclusion as to the cause. Body, glaze and fire should be considered and even the water used in mixing. An experiment or two will help to locate the difficulty and the pleasure of overcoming it is great.

The glazes given last month may be colored by any of the metallic oxides ordinarily in use. Copper oxide will give a transparent green, cobalt oxide a dark blue, manganese oxide a purple brown, iron oxide a yellow buff and nickel oxide, sparingly used, a grey. Mixtures of these will produce almost

any intermediate hue and there is a fascination in preparing one's ideal colors. Incised lines in the body will show dark beneath a tinted glaze because of the greater thickness of glaze in the sunken lines. Modeling may be displayed in the same manner but care should be taken to have the glaze stiff enough so that the flow can be kept under control. Underglaze color combinations may also be attempted. Underglaze colors can be purchased of any dealer and may be laid on the clay before the first fire or on the biscuit. The former course is safer for a beginner because the colors are then not so apt to flow under the influence of the glaze. If this does happen the glaze should be stiffened with a little clay and flint.

Rich and unique effects can also be obtained by dipping one colored glaze over another. The underglaze need not be burned first. If a little mucilage be used it will dry hard enough to be handled for a second coat. This second coat must, however, be thin or the whole thing will peel off.

Still another effect is secured by dipping the newly glazed but unfired piece, held upside down, into a bowl of very thick glaze of another color. Only about half an inch should be submerged and the thick glaze will form a cap on the vase. When this is melted by the fire the glazes mingle and flow in a most interesting manner. There are many of these tricks which

will occur to an enthusiast and the advantage of glaze work is that none of the methods appear commonplace when the fire has worked its will. A piece may look very ordinary before firing but the kiln in its mystic manner will seize upon the crudest effort and transform it into something which, if not always beautiful, may still be interesting and uncommon.



STUDIO NOTES

After several years of travel abroad, Mrs. Mary F. Wagner of Detroit has returned to ceramics with all her former energy and intends residing in Santa Barbara, Cal., where she will open a studio. She has recently been studying in New York.

Miss Candler, after spending three months of study and travel abroad, visiting the art galleries and potteries of the leading cities on the Continent, announces the opening of her studio at 6 Adams Ave. W., Detroit, Mich.

The Atlan Club of Chicago have decided not to have an exhibition of their own this year and will exhibit with the Arts and Crafts Alumni at the Art Institute in December.



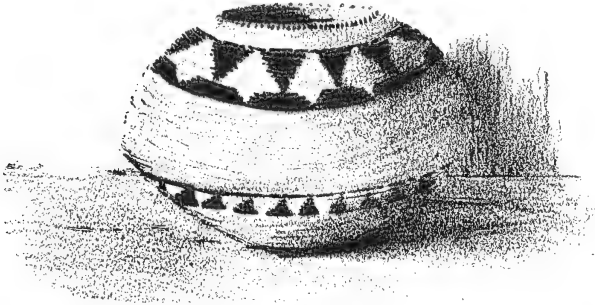
DESIGN FOR PLATE—FLORENCE E. NEWCOMER

To be treated in raised gold and enamel on turquoise or apple green tint, with rose garlands in natural colors.

THE CRAFTS

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SOME SIMPLE BASKETS

Mrs. Hugo Froehlich

THE making of baskets that are useful affords a good chance to produce something beautiful as well. This is as it should be, but to many it is a question of, "How are we to know good baskets?" One way is, to copy shapes of fine baskets, study specimens of old Indian workmanship, as these are almost without exception accepted as the highest expression of Art. Some good reproductions of these can be found in most every library where sketches can be made. George Wharton James in his book on "Indian Basketry" and "How to make Baskets", has shown many fine examples. Also Miss Mary White in "Baskets and How to Make Them", shows some fine Indian specimens and gives simple instruction as to the making of them.

Old pottery made by the Indians gives suggestions of basket shapes, as they used same forms for both. These in most cases are so simple in line and form that they seem to be made without effort. This is a sure sign of good art and is one of the difficult conditions confronting us.

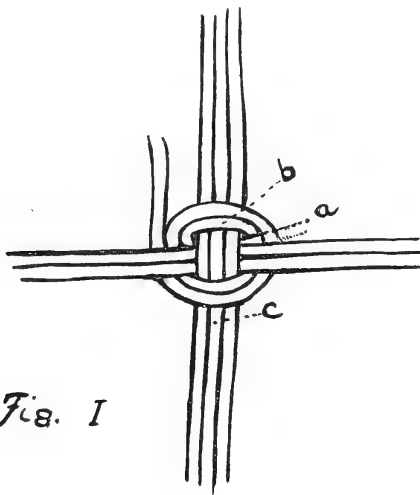


Fig. I

Tools and preparations for simple reed baskets are:—

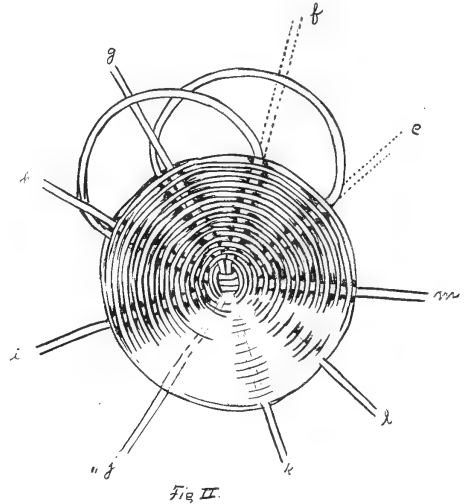
A knife, an awl (or something large enough to make a good size opening), a pair of shears, a large pan or pail in which to soak the rattan, and a measuring stick.

Rattan is a brittle reed and must be soaked about an

hour in cold water before using; oftentimes it will become pliable in less time. It must not be allowed to soften too much as it loses the character of rattan work when soaked too long. It is necessary to keep rattan damp and it will need a frequent dipping in water. Reeds can be more easily handled if each reed is coiled in a separate roll. Make rolls 8 in. diameter and fasten the ends.

Making of a mat:—Begin with a reed mat for hot dishes or flower pots, as it combines simplicity in construction with art elements. Materials are No. 2 and No. 4 rattan.

Cut from No. 4 rattan five strips 18 inches long called spokes; mark center of each; lay three of the strips on top of two at center, keeping the group of three vertical and the remaining two horizontal as in sketch I. Hold this firmly in left hand keeping the thumb on top; take the end of a No. 2 weaver in the right hand and place it back of the three vertical spokes with



the long end of the reed toward the left along top of horizontal spokes, leaving an end *a* on the right for weaver to fasten. Fold weaver over in front of the group of three spokes at *b* and under the two horizontal ones at right, fastening the end of weaver *a* left for that purpose. Continue over vertical spokes below and under horizontal ones at left, always going from left to right.

Twice around in this way will bind the center, going over the end *a* on the second round, so as to cover it.

Cut off lower part of middle vertical spoke at *c*; this leaves nine or an uneven number of spokes and is the foundation for a simple alternate weave, under and over, without the necessity of skipping a spoke at every round.

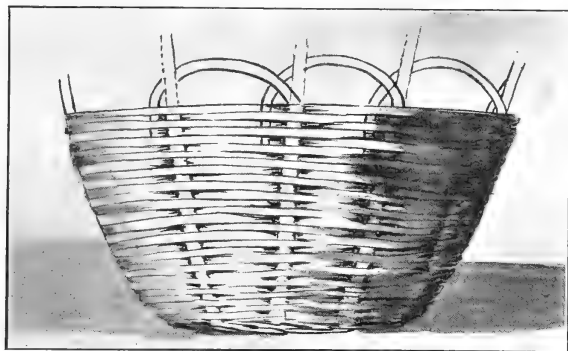
Our next step is to separate the spokes, making them equal distances apart. Continue with the weaving under and over each spoke. If other reeds are required, lap them on the side away from the worker, and go on as before.

Push weaver closely in toward center with fore-finger of right hand, pulling it just enough to insure firmness and even work. Weave until a center of about $4\frac{1}{2}$ in. is covered, cut end of weave on slant, and by preparing a place for the same with the awl at the side of a spoke, insert the end between weaves

far enough to hold firmly. We are now ready for the border.

Measure spokes from center and adjust them by pulling from all sides until they are of the same length. Put the work in water for a few moments to make the spokes pliable as they are apt to crack if not kept thoroughly moist.

Start with spoke *e*, Fig. II, place over it *f*, under *g* and after cutting end slanting insert between weaves, along side of spoke *g* far enough to hold firmly. With spoke *f* do as before, over *g*, under *h* and insert end next to *h*. Continue in this way taking each spoke in turn and plac-



ing it over the one next on the left and under the following one and inserting to fasten. We finish border within. Place it over *e* (although *e* is curved), and under *f*, and insert, as in the other cases at the side of *f*.

The mat will be complete by adjusting the scallops formed by the spokes. Variations may be made in border by placing one spoke over the following spoke and down between weavers, or each spoke over two spokes and down. This is also foundation for simple small baskets.

Basket 9 spoke:—After weaving center of the mat which will correspond to the bottom of the basket, turn the spokes up away from worker, as work proceeds from outside of baskets, by pressing firmly with fingers when spokes are quite pliable. Continue weaving same as before for mat, this forms side of basket, following some good and simple example form of outline. Try not to allow spokes to go in at the top, a tendency they have with beginners.

These first baskets, although encouraging in a constructive way, are seldom beautiful and it is urged that the worker follow good examples and lay great stress on the art side.

See that the border is not too large for the basket and

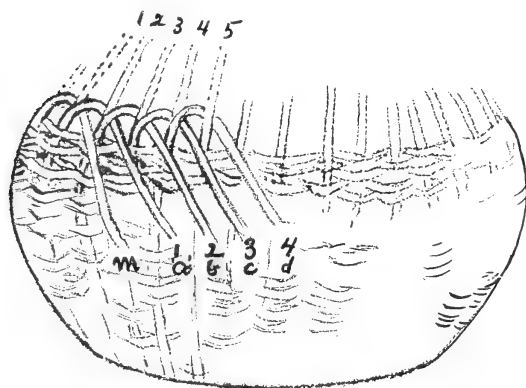


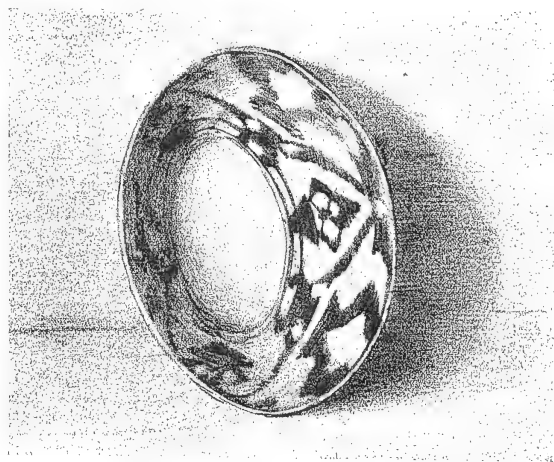
Fig. IV

keep a simple outline. Too many curves detract from beauty. A little experience will soon develop the power to express fine basket forms even with such limited means as that of nine spokes.

The border may be finished the same as the mat, by placing one spoke over the next, under the following, and inserting it at the side of spoke second from first. Large baskets are made in this simple weave by using twice as many spokes. Take 9 spokes 24 inches long, place at centers five vertical and four horizontal; proceed as before, binding center by bringing weaver twice around, cutting off middle one, then separating spokes and proceed as in the mat.

Border to this basket is a little more complicated. Leave five inches of spoke at least for border after weaving is finished.

Place the spoke 1, Fig. IV, behind 2 and out in front between 2 and 3. Place 2 behind 3 out in front between 3 and 4. Continue in the same way with all the spokes until we reach the last spoke *m*. This last spoke will coil behind 1 and out in front at right side of 1. Finish by putting ends up between the next two, viz:—1 *a* under 2 *b* and through to inside of basket at left of 4; *b* under *c* and through to inside at left of 5 and on until we reach the next to the last spoke, left of spoke 1; this is looped under *m* and inside basket at left of 2. The last one will be looped under *a* and pushed inside basket left of 3. Cut off all ends inside of basket with sharp shears and call the basket finished with only a righting up here and there and a final pat of approval.



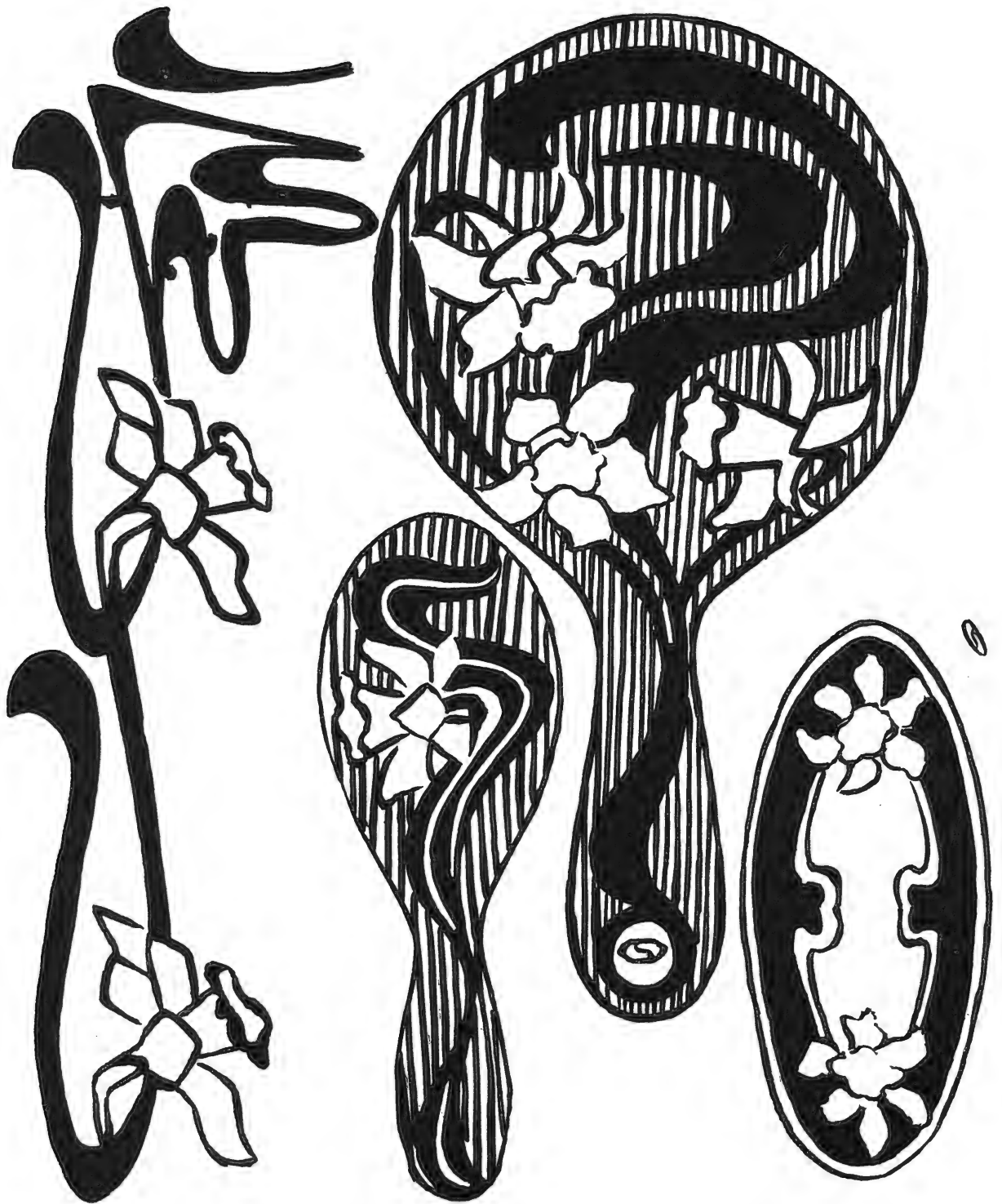
ANSWERS TO INQUIRIES

H. C.—What is the best way to finish a stand of hammered iron? A very good finish for hammered iron is produced by rubbing the metal with medium sized emery cloth, do not rub every part, leave some parts darker, then rub with beeswax put in a cloth, and afterwards go over the entire surface with a clean soft cloth.

K. S.—How can I color copper? The copper tray can be colored by applying heat slowly until you get the desired effect. The tray must be perfectly clean and polished to get good results. To give a dull antique finish, treat well in the flame, and while the metal is hot rub it with a cloth that has been dipped in machine oil.

R. I.—We expect to have lessons in metal work continually in KERAMIC STUDIO, and later will take up enameling.

L. U. C.—The leather sent is not very strong but could be used over velvet or heavy silk of contrasting color, or the silk can be colored. If for a belt, cut out a simple design in the leather, tool some lines round the design, and fasten on the silk with Sphix paste.



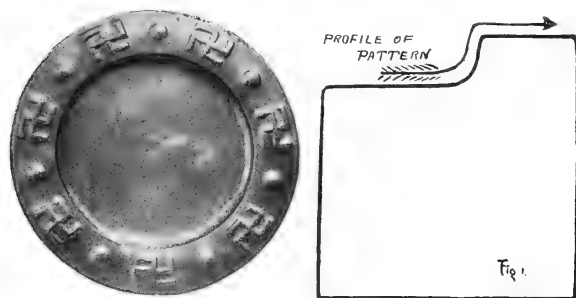
PYROGRAPHY DESIGN FOR TOILET SET—MIRIAM SAUNDERS

OFFERING PLATE OF COPPER

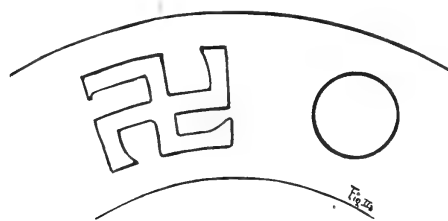
Emily F. Peacock

THE offering plate of copper is 12 inches in diameter when finished, and 18-inch gauge copper is used. It is always better to have the metal a little larger than needed, so the piece for the plate should be 12½ inches square.

Mark on this three concentric circles, with a steel compass, the first circle, 12½ inch in diameter, the 2d, 10 inches in diameter and the 3d, 9½ inches in diameter. The space between the two inner circles is to be beaten. Fasten a pair of sharp shears very securely in a vice, and holding the metal in the left hand, cut evenly and firmly round the outer circle. Take off the rough sharp edge with a medium sized file, and finish with emery cloth.



The next thing to do is to make a wooden pattern (Fig. 1), exactly the shape of the finished plate. This pattern is made by chiseling one side of a block of hard wood to the required curve, and then smoothing *all* the edges with sand paper. When this is done, anneal the plate, place the pattern in a vice, and holding the center of the part to be beaten over the center of the groove in the block, commence to beat with a medium sized steel hammer. Give even blows, each one following closely the last one, until the body of the plate is the desired depth. If when this is done, the inside edge of the rim of the plate is not sharp enough, hold the rim firmly over an anvil and hammer the edge gently with a round faced hammer, turning the plate slowly all the time.



Put the design (Fig. 11) on the back of rim and place the plate on cement, go over the design with a broad tracer and repoussé.

PYROGRAPHY

TREATMENT OF TOILET SET

Katherine Livermore

BURN outlines; make a decided contrast between the inner and outer backgrounds; keeping the inner one very delicate rather than using the heavy lines indicated—a point stippling would be preferable. The outer one may be burned as heavily as indicated.

Use gamboge to color the flowers and sap green for the leaves—put a flat wash on and when perfectly dry, shade the flowers and leaves very delicately with the hot point, using line

shading; the effect of the burning over the color is very harmonious, but can only be done when water color is used.

ANSWERS TO CORRESPONDENTS

G. B. W.—There is no doubt that your Aufsetzweis was not fired hard enough if it came out without a glaze. It should always go in the hottest part of the kiln and needs to be fired harder than carmine. You could add one-eighth flux to facilitate firing at a lower temperature.

For your bureau set in lustre we would advise, as most appropriate to that pattern of china, a tint of yellow over rose, which produces delicate pearly tones. Clean out medallions of white which can be tinted an ivory tone and surrounded with dainty garlands of roses or asters with leaves and stems in raised and flat gold—or if preferred, the little flowers may be painted in the medallions. All lustres are about equally reliable as they are all imported originally from the same firm. Powder colors are most desirable for general use, but tube colors are easier to use for tinting. Powder colors are usually ground fine enough for dusting but it is safer to pass them through a fine bolting cloth—a biscuit cutter with the bolting silk tied over one end makes a very good sieve. It is impossible to name a pink that will not turn purplish if over-fired, all are about equally unreliable, but many are very good if carefully used and fired.

Mrs. E. G. T.—The fine white spots on your reds and browns, of which you complain, are due either to imperfectly ground and mixed color, so that color and oil separate and leave white spots; or there is moisture in the kiln which deposits tiny drops of water on these colors which are more sensitive to moisture than the others.

S. F. P.—You will find designs for tiles in June '02 and Feb. '03 KERAMIC STUDIO. These are to be carried out in blue and white or green and white, using one to three tones of the same colors, lustres are hardly suitable. Tiles could be numbered on the back if necessary to have a certain order. They can be purchased of any china dealer or Marsching & Co.

OLD RHYMES ON TANKARDS

IN the days of the old stage coach and country inn, when peer and highwayman quenched their thirst with the contents of the same pewters, it was a common practice to inscribe on these tankards rhymed couplets, often the inspiration of the village poet, and more or less eloquent of bibulous wisdom. Although the sentiment of these verses will not commend itself to abstainers, says a contemporary, they are worth placing on record, as throwing a light on the habits and humor of other days. One of these couplets sums up the ordinary man's antipathies thus:—

"Two things all honest men do fear:
A scolding wife and ill-brewed beer."

Another is loyal and almost moral in its philosophy, and runs thus:

"Drink fayre, don't swayer;
God save ye King!"

The pewter on which these lines were inscribed has a history of centuries.

A very sensible rhyme is a parody of the well-known fighting couplet, and runs thus:

"He who drinks and runs away
Will live to drink another day."

There is quite a mine of moral teaching in a few of the verses inscribed on these pewters, as in these:

"Straight is the line of duty,
Curved is the line of beauty;
Follow the straight line, thou shalt see
The curved line ever follow thee."

This verse has more appropriately been found on water jugs in village inns. On some tankards are to be seen quaint perversions of common maxims. One assures us that "It's a long tankard that cannot be refilled." Another suggests, with Taleyrán philosophy, "Never put off till to-morrow what you can drink to-day;" while a third conveys a very useful and timely hint in "It's a muddled man who doesn't know his own pewter." Nearly all the above are applicable to and have been inscribed also on pottery.—*Pottery Gazette*.

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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KERAMIC STUDIO

Vol. V, No. 8

SYRACUSE NEW YORK

December 1903



It is interesting to mark the influence of Mr. Hugo Froehlich's lessons in design as illustrated by the work submitted for the fall competition. There is beyond a doubt a decided improvement in the general aspect of the designs which can be clearly traced to this inspiration. The spring competitors will have the added advantage of the lessons on color which will be given in the succeeding articles by Mr. Froehlich.

We give in this number reduced illustrations of some of the designs having received mentions in our competition, so that all readers of the magazine may derive some benefit from the criticism. Most of these designs will be reproduced later on, in full size and with treatment.

Mr. Binn's articles on Clay in the Studio will be given the alternate months with Mr. Froehlich's articles on Design in order to leave more room for practical designs for beginners.

Mr. Binn's next articles will appear in January and March. Mr. Froehlich's in February and April, and so on. This will give students a month to work out the problems on design.

DESIGN COMPETITION

SINCE the KERAMIC STUDIO first instituted its yearly competition, a steady improvement has been observed in designs submitted but never has the advance been so marked and so gratifying as in this fall's competition. In fact it has been a puzzling matter to select the best from so many interesting and meritorious efforts as were classed under the head of "motif applied to four forms."

The Conventional Studies in color averaged better than last spring, although no one study was as entirely satisfactory as the Wild Carrot Study of Miss Mason or the Peacock Study of Mr. Rhead.

The drawing and composition showed an advance along these lines, but in color and finish the work was not up to the standard.

The requirements of a Conventional study in black and white were not well understood by many of the competitors, but a few good examples is all that is needed to set our designers at work in the right direction with good results another year.

This was better understood in the color studies, but another year will show improvement in the color itself, especially after Mr. Froehlich's articles on color which will be given before the next competition.

The naturalistic studies did not average as well as the others, whether from a falling off of interest in naturalistic treatment of subjects or from failure of our better workers to see that a good naturalistic study is the best foundation for a good conventionalization, we cannot say.

The prizes were awarded as follows:

NATURALISTIC

FIRST PRIZE—Mrs. Elizabeth Brame Van Kirk, Whatcom, Wash.

SECOND PRIZE—Edith Catherine Humphreys, Kensington, London, Eng.

MENTIONS—Mary V. Thayer, Holbrook, Mass.; Mrs. Emma A. Ervin, Denver, Colo.; Russell Goodwin, Marblehead, Mass.

ADAPTATION OF MOTIF TO FOUR FORMS

FIRST PRIZE—Emily Hesselmeier, San Francisco, Cal.

SECOND PRIZE—Alice Joslin, Jamaica Plains, Mass.

THIRD PRIZE—Lucia A. Soule, Boston, Mass.

MENTIONS—Margaret Overbeck, Greencastle, Indiana; Arthur Kidd, London, Eng.; Alice Witt Sloan, Charleston, S. C.; Edith Alma Ross, Davenport, Iowa; Mary G. Simpson, London, Eng.; Mary Overbeck, Cambridge City, Indiana; Austin Rosser, Butler, Missouri; Beatrice Brooks, London, Eng.; Harriet B. Hurd, Bridgeport, Conn.; Yvetta Stock, Paris, France.

CONVENTIONAL STUDIES IN COLOR

FIRST PRIZE—Russell Goodwin, Marblehead, Mass.

SECOND PRIZE—Hannah Overbeck, Cambridge City, Ind.

MENTIONS—Mrs. Emma A. Ervin, Denver, Colo.; Margaret Overbeck, Greencastle, Ind.; Carrie E. Williams, Dunkirk, N. Y.; Alice B. Sharrard, Louisville, Ky.; Margaret J. Postgate, Brooklyn, N. Y.

CONVENTIONAL STUDIES IN BLACK AND WHITE

FIRST PRIZE—Edith Alma Ross, Davenport, Iowa.

SECOND PRIZE—Edith Alma Ross, Davenport, Iowa.

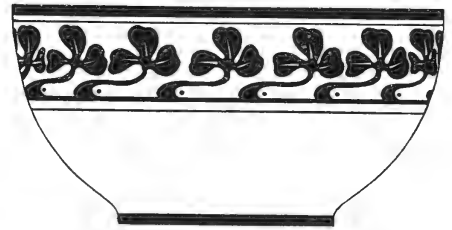
MENTION—Margaret Overbeck, Greencastle, Ind.; Hannah B. Overbeck, Cambridge City, Ind.; Jennie Hanson, New Haven, Conn.

The first prize design for set, by Miss Hesselmeier is a singularly refined and dignified as well as clever conventionalization. The outline drawing of the Harebell motif submitted with it was not as carefully executed as should be but certainly the application to the four forms was a most thoughtful piece of work. The width of band as compared with the forms decorated is particularly fine, as is the graceful flow of line.

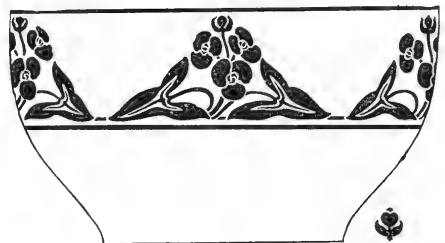
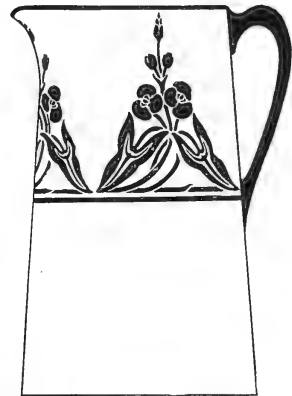
The second prize design by Miss Joslin is not so rich in imagination but is a clever and appropriate handling of a simple motif. The third prize design by Miss Soule is a beautifully executed piece of work, the decorative unit also is well conceived but the band divisions being so near the center of some of the forms are not so good as might be and the triangular effect of the quiet spaces left between units is not well considered, the lines of bowl and pitcher are exceptionally good. Taken from every point of view, proportions, suitability of decoration, shapes of dishes, originality, these three sets are the most satisfactory. Many other sets have individual pieces of as great and in some cases perhaps greater merit, but the entire set of four pieces does not average so well. We have found ten other sets with individual pieces worthy of special mention and most of the unmentioned sets are not without merit.

Taken altogether however, we feel that an interesting and progressive lot of designs has been submitted and from the giving of the little cuts with criticisms we trust that the work of next year may profit.

The general effect of the set submitted by Miss Ross is unique and pleasing, the proportions of the bands, the outlines



SECOND PRIZE, CONVENTIONAL SET—ALICE JOSLIN



THIRD PRIZE, CONVENTIONAL SET—LUCIA A. SOULE



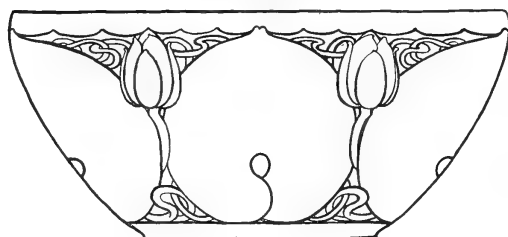
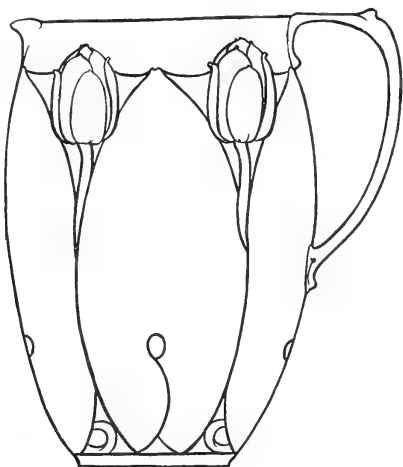
EDITH ALMA ROSS.

of the shapes decorated and the general color effect are good; the design itself however, while very original and suggesting pleasantly the Indian influence, is not sufficiently studied.



MARY SIMPSON.

The fish design set of Miss Simpson while well drawn and proportioned has not the dignity necessary in a prize design, the shapes also were not so good as many others.



ARTHUR KIDD.

The pitcher and bowl of the set submitted by Arthur Kidd while somewhat too elaborate, is well conceived and executed and fits well the form; the decoration on the other forms was altogether too heavy for table ware.



MARY OVERBECK.

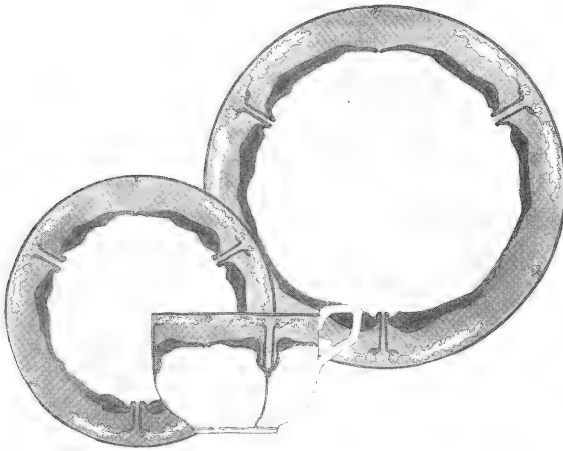
The designs submitted by Miss Mary Overbeck were very

interesting and show strength but were too heavy on cup and saucer and plate, the lower line of band is weak. The motif of Dogwood berries is well conventionalized.



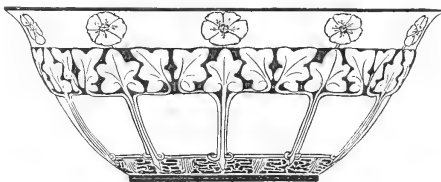
ALICE WITT SLOAN.

The designs by Mrs. Sloan are beautifully executed and well adapted, not quite simple enough. Her work however is unique and promises well.



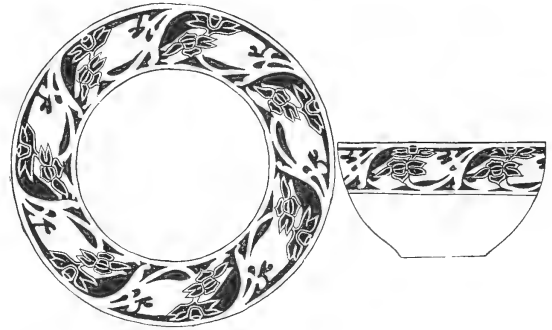
MARGARET OVERBECK.

The set by Miss Margaret Overbeck while dainty and graceful and well adapted to the forms carries this very trait of daintiness to weakness, the small alternate form on edge is finicky and the color effect which has been strengthened in the reproduction was too weak, having nowhere a note of strength as in her prize design of last year.



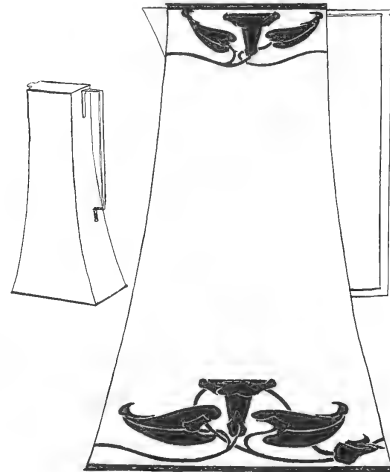
BÉATRICE BROOKS.

The set by Miss Brooks while fitting well the form, is over elaborate and on plate and saucer has a wheel effect which is not as agreeable as a plain space.



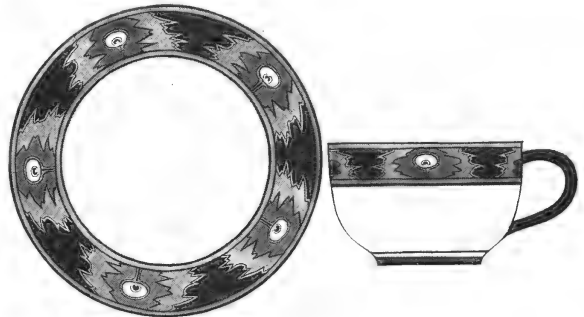
AUSTIN ROSSER

Miss Rosser's work is extremely original and well executed, is not restful, there is too much motion and overelaboration to excentricity—it promises extremely well, however.



YVETTA STOCK.

The Morning glory design by Yvetta Stock, while well executed and good in forms of dishes, the pitcher rather suggesting execution in metal, is rather straggling in effect



HARRIETTE HURD.

Miss Hurd's set is extremely good, the conventionalization of the Dandelion flower shows a truly assimilated Indian influence, the color effect is fine, the proportions of bands however were not so fine on three of the forms and the decoration of the tall form not well thought out.

BOSTON EXHIBIT

THE Mineral Art League of Boston held its annual exhibition at the Westminster during the week of October 19. On the opening night a private view or informal reception was given to the patronesses and friends of the League. We quote from the Transcript of October 21: "This is the best exhibition ever held by the League. Since it first began to hold annual exhibitions the improvement in taste and skill has been very marked. The china decorator of ten years ago commonly selected a piece of china distinguished for its oddity of form which was often so rococo as not to be worth decorating at all; offering little or no plain surface for a design. This vagary of taste has been outgrown and it is pleasant to note that the shapes now in vogue for such purposes are not only far more simple and sensible but are often extremely elegant and refined in contour. Conventional patterns for decoration have also taken the place, to a great extent, of realistic or naturalistic motives, and the gain in this respect has been very gratifying. The artists, evidently, have paid more attention to the study of Chinese and Japanese ceramic art and less to the English and French examples and this has resulted in a very distinct degree

of progress. The designs are better adapted to the form of the objects and are more in the spirit of pure ornament. The plants, flowers, birds, fishes, etc., used as motives are now employed in a conventional manner, and not in a still life pictorial way. The artistic advantage of this is obvious. The entire collection has a professional aspect, where formerly it had an amateurish look. There is a corresponding refinement and restraint in the use of color; the scheme of color has more simplicity and consistency, the tints and laid in flat tones, without light and shade, depending rather for their effect upon the linear pattern and the harmonious contrast of two or three well related tones."

BALTIMORE CRAFTS

THE Arts and Crafts Society of Baltimore has re-opened its workshop at 323 North Charles street; hours 10 a. m. to 5 p. m. The classes in Historic Ornament and Design for art students, designers, craftsmen and teachers will be resumed. Apprentices, to learn the crafts, will be chosen from those who are taking the course in design arranged by the Society.



POND LILY DESIGN FOR CUP AND SAUCER—MARIE CRILLEY

Background of cup and saucer, Night Green and Deep Blue Green. Leave flower white; tint stamens Yellow; leaves to be of Apple green, Mixing Yellow and Brown Green

No. 6, to this add a little Flux. The black portion should be of gold.

Outline design with black.

GRAND FEU CERAMICS

VII.—Glazing

Taxile Doat

THE glaze is a vitrifiable covering which is deposited on a ceramic piece to give it the glossy appearance, which decorates it so harmoniously and is a joy to the eye as well as a pleasure to the touch. It must essentially harmonize with the material which it covers and be vitrified at the same temperature. If it covers a common clay like

the faience clays, which vitrify at a comparatively low point, its function is mainly that of protection. Such a piece keeps its porosity, remains sensitive to the action of water, consequently also of frost, and is destructible. It is only when covered in every part with the vitreous glaze and kept in a place where it will be protected from atmospheric variations that it will reach a certain age.

If, on the contrary, the clay is vitrified at such temperatures that after firing, it will be proof against the action of water and frost, the glaze has its logical function. It is an ornament. In that case it may indifferently cover part or the whole of the piece without any risk for the latter, which is eternal. This is so with grès and porcelain, and for this reason they are the ceramic materials par excellence.

Take a faience and examine it. It is glazed all over, for the least point which would be uncovered would be the open door for the destructive humidity. Consider porcelains and grès in their splendid variety, whether Oriental or Occidental, the glaze is used according to the fancy of the artist and the bottom is always uncovered, because the impermeability of the body has given it the right to longevity. All the secret of the superiority of these two products is there.

Though faïences can be covered with lead and tin glazes, grès and porcelain require a feldspathic and calcareous covering. But whatever its nature, the ordinary glaze, improperly called white, must be colorless, brilliant, translucent and limpid. It must spread uniformly over the parts which it covers without producing blisters or crackles. Its fusibility and its dilatation must agree with the firing temperature of the body. Too much and too little fusibility are the sources of a number of accidents injurious to the piece, not very marked perhaps when it is without decoration, but most unfortunate if the piece is richly ornamented. Crazing is the most common of these accidents with the French porcelain which is very rich in alumina. It is caused by a greater shrinkage of the glaze than of the body, or vice versa of the body than of the glaze. Crackles occur during the cooling off and are announced during the opening of the kiln by a sharp and metallic cracking noise. It is then of the greatest importance that there be harmony between the body and the glaze, and they are hardened or softened, according to cases, by reducing or increasing the fusible element: potash, soda and lime for the glaze and for the body, the plastic element, clay.

There is no rule, no scientific basis on which to establish this relation, this same coefficient of expansion of both matters. The only guides are experience and trials. The action of the fire itself may be the cause of crackles. I use three glazes with a basis of copper, this very sensitive metal, which crease outrageously in a reducing fire and acquire all their limpidity and richness in an oxidising atmosphere. And it will be the reverse with others.

These accidents and their known causes have induced the

Oriental to produce the intended creasing, called "truité," with its close net of crackles which so happily decorates some of their products.

Beginners will do well to do as I did, to adopt the glaze which is sold with the body they buy, and which fits it. Both are determined by series of experiments which it is the duty of merchants of clays to make. They have all interest to constantly control their product which may vary according to the purity of the quarry veins. By buying a prepared glaze artist potters will avoid much unnecessary trouble.

Having adopted for my own production the hard silicious Sèvres porcelain called P N (porcelaine nouvelle), and wishing to have a glaze which would fit both porcelain and grès, I use the glaze of soft type, called calcareous, which has long been studied at Sèvres for this purpose. Its composition is:

Fontainebleau sand	43
Bouguival chalk (craie)	33
P N biscuit	24

It is the glaze which is furnished by Mr. Frugier, but the sand can be bought from the factory of Creil and Montereau, the chalk from Loulenc Freres, 92 rue Vieille du Temple, Paris, and the biscuit can be obtained by grinding and porphyrising unglazed fragments of P N body. This source of supply makes it unnecessary to speak of the washing, grinding, screening and the general preparation of this glaze, which requires a special outfit.

There are five different ways to put the glaze on grès and porcelains: Immersion, insufflation, imbibition with sponge, painting with brush, and blending mixed with fat oil.

1—If the piece is in the condition of *biscuit*, that is, fired but unglazed, like a Wedgwood, the powdered glaze can be fixed on its smooth surface, hard like flint, only by using a fat and sticky medium. This medium is the fat oil of turpentine, which is mixed with the glaze on a rough glass with a palette knife. The mixture is blended with a brush on the vase in successive coats, each being duly dried out on a stove or near a fire.

If the piece has been fired and glazed but it is found necessary to fire it again, either for additional decoration or to remove the flaws of the first firing, the reglazing should be done as before, but of course with thinner coats according to the amount of glaze which is already on.

2—If the piece is baked, that is, if it has already such solidity and porosity as have been given to it by a beginning of firing, it can be glazed by any of the processes mentioned before, *except the fat oil*.

Glazing by immersion is done by dipping the baked piece in a bath, which is constantly stirred in every way, so that the glaze will be held in suspension in the water and that the heavy parts will not precipitate to the bottom, as they naturally tend to do. To make easier this suspension in water of all the matters which constitute the glaze, some kitchen salt, or better, vinegar, should be thrown in the bath, in the proportion of one measure of vinegar for 8 to 10 measures of glaze. Vinegar has over salt the advantage of provoking a fermentation of the glaze which makes it easier to use.

The dipped piece being porous, absorbs the water and the glaze is deposited on its surface. The quick or slow passage through the bath will determine at will the thickness of the glaze. If the piece is thoroughly baked, four seconds are sufficient for a good dipping. All the uneven or missed spots due to the touch of the fingers or to the running of glaze should be very carefully retouched with a sharp blade and a brush. If salt is used, it is important to avoid mineral salt which contains iron.

The action of both salt and vinegar is to hold in suspension

the constituent matters of the glaze while the immersion lasts, and to avoid the deposit at the bottom of the tubs of the heaviest parts, which form a very hard crust. Zinc tubs are corroded after a few years by the action of this settling. The best tubs are of copper or grès.

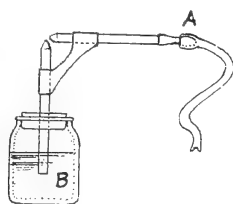


fig. 27

3—If the piece is raw, the immersion which would dilute it, is impossible, or at least would be of a very difficult manipulation. In this case, one has recourse to the atomizer, the sponge or the brush.

The atomizer is an instrument (Fig. 27) which under air pressure sprays on the vases the liquid glaze contained in a glass. As I have no motive power for the air pressure, I use blacksmith's double action bellows worked by hand (Fig. 28). One branch of the atomizer is fixed to the rubber tube of the bellows, the other plunges in the glass jar B containing the glaze. The vase is placed on a revolving table, which is set in motion with the left hand, while with the right which holds the glass the spray of liquid is scattered over the vase.

An assistant should work the bellows. To save this trouble, I keep the table T which supports the vase (Fig. 29) revolving by means of the clock work of an old roasting-jack which is among my heirlooms. The top of the little table has a groove for the passage of a rope. I can thus work the bellows with the left hand and graduate at will the strength of the spray.

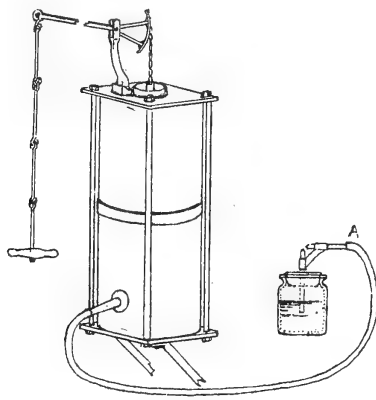


fig. 28

Chinese potters spray their pieces with a long bamboo tube which is filled with glaze. One of the openings is covered with a fine gauze. They blow vigorously through the other end, thus spraying the porphyrised glaze.

Insufflation has over immersion the advantage of avoiding the necessity of baking the piece and also that of making a much more uniform glazing with the many pulverized coatings. But the process is slower.

4—Imbibition consists in mixing the glaze with a mucilage of gum arabic and water. The mixture is applied in successive

coatings with a very fine sponge, with close pores. This process makes it possible to shade the glazing, to obtain the cloudy effects so characteristic of old Korean potteries, and to avoid, when such effect is desired, the coldness of a too regular glazing.

5—I have kept for the last the glazing with a brush, which sums up all the other processes and, although slower, may in almost all cases be advantageously substituted for them, whether the pieces are raw, baked, biscuit fired, or glazed.

The sable brush must be flat, short, of different widths for the different size surfaces to cover, with a round handle 10 to 12 inches long (Fig. 30). Its ring must be of brass, with copper nails. The medium is a mucilage of the precious gum tragacanth. A handful of gum is enough to glaze fifty large vases. A few chips of gum are infused in warm water and left to dissolve two days, when the mucilage is screened to insure its perfect dilution, and used according to the thickness of the coating of glaze.

If the vase is biscuit fired, a very, very thin first coat is put on and dried in the open air or in the sun. The second coat may be thicker with less gum, the third thicker yet, and

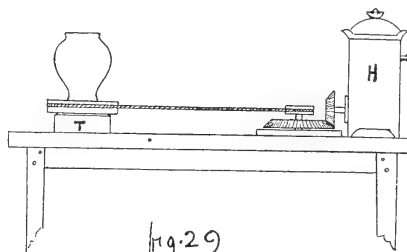


fig. 29

the fourth must complete the glazing. It is most important that each coat should be put on only when the previous one is thoroughly dry, and all rapid drying by fire should be avoided, as it invariably causes cracks and blisters.

When the piece is raw or only baked, three coatings are sufficient, the first thin, the second thick, and the third thin again, just enough to even up the work.

This brush process is slower, but it makes it possible to reserve certain parts of a piece which is to have two or three different glazes, mat, glassy or metallic, as is the case in most of my ceramics, and is economical from the fact that not a particle of glaze is lost as happens with the atomizer. As glazes do not always come out successfully and are expensive, this is a point which is of no small importance to beginners.

There is another glazing process called *salt glazing*. It is suitable only to grès and can be used only if all the pieces in the kiln are grès. Toward the end of the firing, marine salt is thrown in the fire hole. For each 40 cubic inches of capacity of the kiln, and according to the desired effect, from 200 to 800 grammes altogether should be thrown in three equal parts, every fifteen minutes, in the fire hole. Of course salt glazed pieces must be placed free in the kiln, not enclosed in saggars.

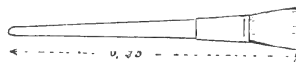


fig. 30

As a conclusion to this article, I advise the artist potter to adopt as I did, the glaze P N of Mr. Frugier, which fits the body P N of the same merchant. He will also choose for glazing, as I did, the brush and gum tragacanth. It will be well for him to bake all his pieces, so as to make them less

brittle, to make easier the handling and glazing, especially the inside glazing. To glaze the inside of a piece, the glaze should be poured rapidly into it with a funnel, and it should also be quickly poured out four or five seconds later.

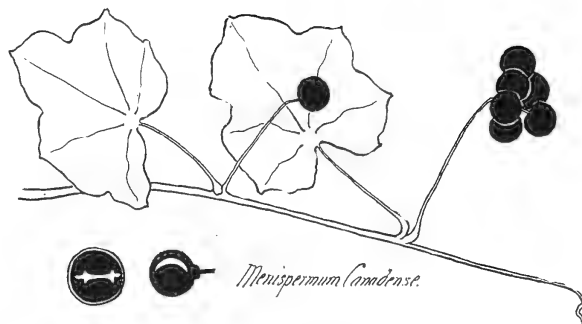
Figure work requires double care, and while three coats of glaze are sufficient over the other parts of a piece, over figures six very thin coatings should be given.

Pieces to be refired will be glazed with the fat oil of turpentine, after the spot to be retouched has been carefully cleaned.

In the manipulation of matters which are used with water, rust, dirt, and all fat substances over which the water runs, should be carefully avoided.

Before glazing, the artist should brush the pieces, or better, clean them, either with hand bellows, or with the strong wind from the atomizer, if necessary with sand paper.

By arranging all his pieces together and getting them ready to all pass through the same operation at the same time, he will gain time, which is money, say the English.



MOON SEED

Edith Alma Ross

Berries Blue Black, leaves soft thick Green, whitish below.

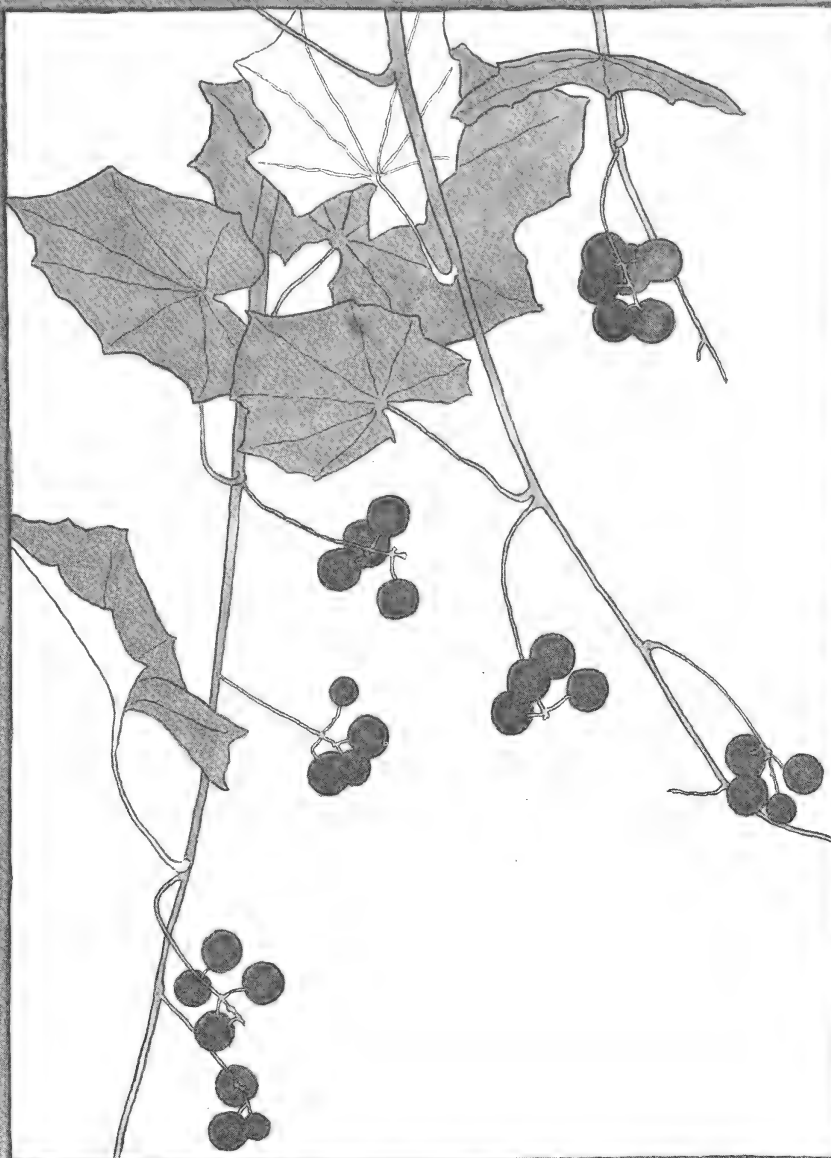


LILY DESIGN FOR PLATE—ANNA B. LEONARD

THE entire design may be outlined in raised gold (or black) and filled with solid gold. The background would look well in opal lustre. The same design may be carried in three or five flat tones, the full blown flower and buds in one tone, the stems and leaves in another, the spaces about the full flower in one tone and the spaces about the buds in another—such as dull red, grey green, light and dark, and a powdering of gold dots in the spaces about the large flower with dull red band on edge,—the whole design being outlined in flat gold. There will be twelve divisions, the large flower placed in the center of every alternate division and the two buds in the other. Another color scheme may be blue and green, the flowers being

dark blue, the stems and leaves, light and dark green and a turquoise blue tone in the spaces about the large flowers, outline in flat gold. Dark fine band on the edge with an inner line of gold. The lines of the design being simple, it will look well on pottery, either the outline raised or incised, or merely a flat tone of blue under the glaze, or as an enamel of glaze. The stamens when colored will make pleasing spots and they may be raised or flat.

In combining several flat tones, have nothing vivid. Any color will go with another if it is grey enough—this effect can be obtained by adding a little black to any color that is too vivid, this is essential if the flowing enamels are used.



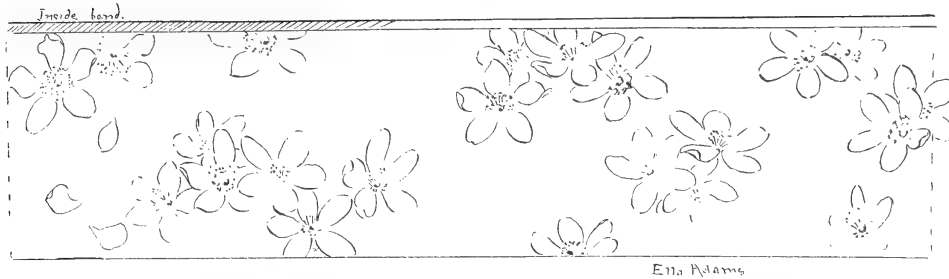
BY HELIANTHUS

MOON SEED—FIRST PRIZE CONVENTIONAL STUDY—EDITH ALMA ROSS



PLATE, CUP AND SAUCER DESIGN—CHARLES BABCOCK

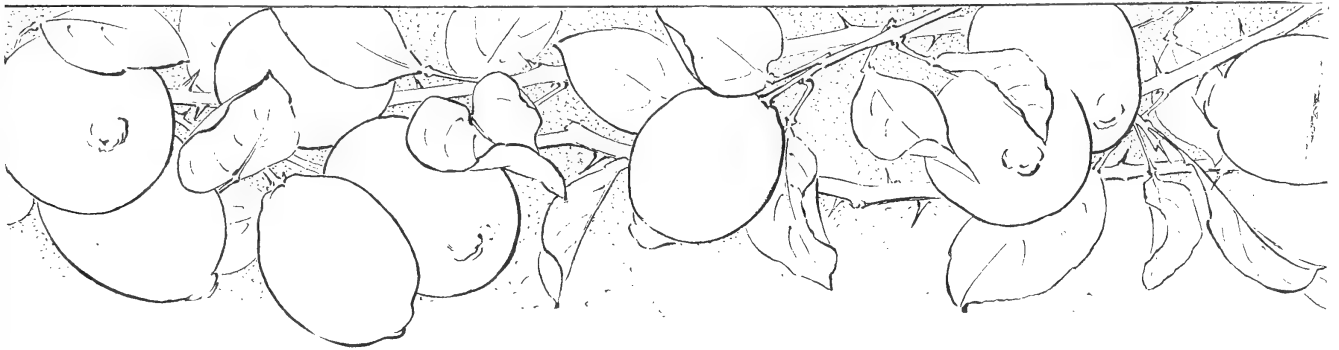
Design to be carried out in ivory and yellow brown lustre on a black lustre ground with gold outlines. From edge to first circle, yellow brown, two narrow bands either side of design, ivory, diamond shaped flower, yellow brown with ivory calyx.



LEMON DESIGN FOR PUNCH BOWL—ELLA L. ADAMS

FIRST Firing.—Leaves and lemons outlined in Outlining Black. Band above lemons in Red Gold Bronze. Band on inside of Gold Grey with blossoms wiped out. Second firing.—Lemons in Yellow and Orange Lustre. Leaves in light and dark

Green Lustre. Inside of bowl tinted warm Grey with the most prominent blossoms wiped out. Third firing.—Background for lemons of warm Grey, Violet of Iron and Russian Green. Blossoms shaded faintly with centers in Pale Yellows and Greens.



CLUB NOTES

The Kansas City Ceramic Club held its Eighth Annual exhibit November 2 to 7, in the Athenaeum parlors. The individual work done by members of the club shows a great improvement each year. The exhibit of the National League of Mineral Painters was shown at the same time, the public took a great interest in this and in a Loan exhibit which included many pieces of rare old china as well as fine new china. Many fine specimens of pottery in the biscuit of native clay were shown by the Art Pottery Club.

MRS. W. G. WHITCOMB, Sec'y.

The program of the Bridgeport Art League for the coming year contains many names of note and shows a progressive spirit above the average. The lectures are to be as follows:

Sept. 21. Frederick Dielman, N. A., subject "Influence of Art and Art Study."

Oct. 19. Mrs. Worth Osgood, subject "Certain Ceramic Problems Solved."

Nov. 16. C. D. Weldon, A. W. C. S., subject "Japanese Art."

Dec. 21. Mrs. Adelaide Alsop-Robineau, subject "Ceramic Design."

Jan. 18. Walter Shirlaw, N. A., subject "Composition of a Picture."

Feb. 15. Charles Rollinson Lamb, Sec. Nat. Arts Club, subject "Stained Glass Painting—Municipal Art."

March 21. Marshal Fry, subject "Study of Design for the Keramist."

April 18. Mrs. E. M. Scott, Pres. Woman's Art Club, N. Y., subject "Water Color Painting and Home Decoration."

The schedule is artistically gotten up with a blue and grey cover and printed in blue.



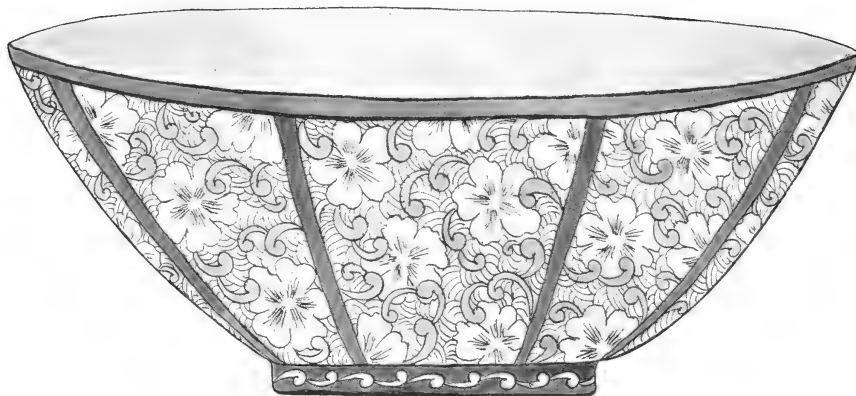
STUDIO NOTES

Artists and amateurs of Detroit, Mich., have been pleased to welcome to their midst Mr. Paul Dorrington, who is a native of Dresden, Germany, and has been associated with the Royal Saxon Porcelain Mfg. at Meissen, Germany. Mr. Dorrington devotes himself to figure and portrait work, but is much interested in the conventional work done in America.

Mrs. Sherratt, with the assistance of her nephew, Mr. Thomas Banes, will continue to conduct the Sherratt China Art Store in Washington.

The death of Mr. Sherratt was an irreparable loss to the firm, but the art work of Mrs. Sherratt is of the same order as that of her deceased husband, whom she was accustomed to assist, and the work of Mr. Banes is of equal merit.

Miss Lambertson of Brooklyn, one of the young and earnest workers in ceramics, has opened a studio at the "Oxford," 707 Fulton Street, Brooklyn.

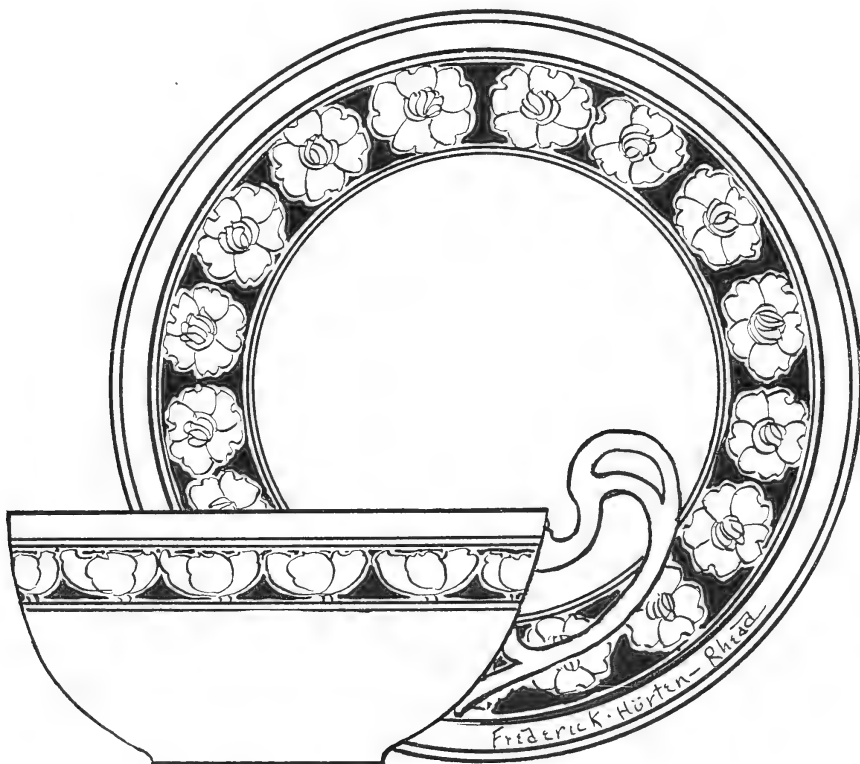


JAPANESE BOWL—MABEL C. DIBBLE

A simple Japanese motif adapted to bowl, or cup and saucer. Divide bowl into five or more sections; outline bands, scrolls and flowers in Blue, using Dark Blue with little Deep Purple and Brunswick Black—also make the fine lines in flower petals and the deeper background all in Blue, making the latter lines finer than the outlines of flowers, etc. After firing fill in the bands with the blue mixture adding one-eighth

Aufsetzweis and floating the color on; fill in the scrolls with a soft Grey Green enamel, using Apple Green, Yellow for mixing, considerable Brown Green No. 6 and Brunswick Black, with one-fourth Aufsetzweis. Touch up any faint lines in flowers and fire again.

This design is exceedingly dainty for bread and milk bowl and plate, or small cup and saucer.



DESIGN FOR CUP AND SAUCER—FREDERICK H. RHEAD

Flowers, Lemon Yellow; center, Egg Yellow; background behind flowers, Pale Heliotrope, Sage Green and Gold; lines and handle, Gold.

PRINCIPLES OF DESIGN

(Sixth Lesson)

Hugo Froehlich

UR surroundings are such potent, although often unconscious influences in the development of taste, that we frequently overlook their merits or demerits. The quarrel that is waged between poorly designed furniture, naturalistic effects in rugs, explosions in wall paper, heavy colored wood trimmings and pictures out of harmony with all

else, marks us as victims. Although we may be unconscious of it, our nerves are constantly being harrassed.

This seems contradictory, but it is nevertheless true. How often are we conscious of the noise of the street? People living near a railroad are not cognizant of passing trains. So in sleep we who live in large cities may not actually hear the roar of the street, but the roar is there and is continually wearing on our nerves. We usually plan to spend our vacation in some quiet country spot, away from the nerve destroying noise.

Why are some homes cozy and inviting, others stately and cold, still others luxurious and costly, but forbidding? Why are some like second rate museums while others on the contrary, by their quiet, simple restfulness, awaken a desire to remain? It is invariably due to the taste of the one who controls the arrangement of the home. For this reason the artist's studio is attractive. His studio like his painting is his creation. On his walls may be found prints, draperies, bric-a-brac that are like little songs of beauty, and so arranged as to form one complete melody which we call his art atmosphere. In this melody the construction of the room, the color of floors, walls, ceilings, the selection of rugs and furniture, play important parts.

The arrangement of a room is governed by design principles as much as any work of art. And wherever it is possible to create the designs or better still, the finished articles that are to be a part of the arrangement, just to that extent will the room bear the imprint of our individuality. Often simple means produce good results. Pottery, ceramics, weaving, carving, metal, stencils, etc., are some of the means of transforming the home and creating art atmosphere within the reach of every layman.

It is for this reason that, rather than placing emphasis upon ceramics, the many-sidedness of the design question has been dwelt upon.

The stencil, for instance, is one of the simplest and most effective means of getting good results in decorating the home. It has been extensively used by the Orientals and is an important branch of decoration with the designers of the present day. Walls covered with a plain paper can be made unique by its employment. Similarly, walls covered with a cheap seven cent burlap, tacked on and afterwards sponged to take out wrinkles, offers an excellent ground for stencilling. The burlap being of a low toned grey yellow, offers a quiet refined color that harmonizes well with shelves, cabinets, pictures, etc. The nature of its fibre breaks the color of the stencilling and produces an agreeable color scheme.

Metal work, in shape of sconces, plaques, hanging lanterns and bowls, agrees beautifully with this material.

Curtains, couch and pillow covers, and portieres of various materials can by means of the stencil be made into works of art bearing relationship to the rest of the furnishings, and above all bearing the *imprint of our personality*.

Likewise painting on ground glass produces an effect similar to, though not so rich as colored glass. This can be framed and fastened to the window sash without disturbing the construction of the window.

Problem I—A good working stencil can be made by planning the design on some heavy paper like manila. If for an all-over pattern, several units as in Fig. 4 may be designed. If for a border, a unit similar to Figs. 5 and 3 may be used.

If for a pillow design of four sided symmetry, but one-fourth of the pattern is necessary. All the laws of arrangement that have been studied thus far are here applicable.

The stencil has many advantages to recommend it to the designer. Once made it can be used indefinitely in multiplying the design. The effect is flatness—viz.: but two dimensions are shown and it is therefore suitable for wall spaces. The nature of its construction conventionalizes a motive. This is especially true of naturalistic forms as in Fig. 3. The fact that all parts of a stencil must hang together is an advantage, as it carries pathways of background color through the design and thus breaks up a large color spot without destroying its mass, as in the Genoese velvet, Fig. 6.

In planning a flower motive for a stencil, take as an example the common garden lily, Fig. 1. From this plan a border as in Fig. 2. Here one complete unit and part of the same unit in the next repeat is shown. To change this into a working stencil, transfer the design to heavy manila paper, and with a sharp pen-knife cut out all the dark shapes, taking care to connect all white shapes with fairly wide pathways. This gives

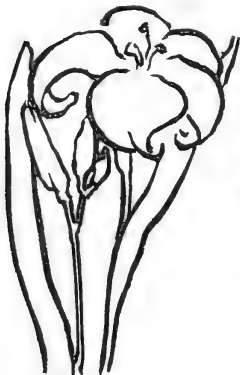


Fig I



Fig II

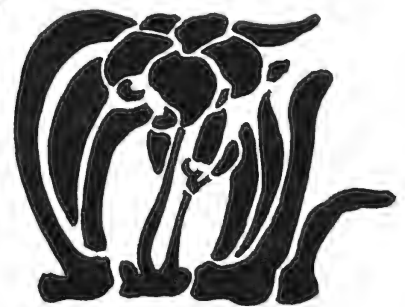


Fig III

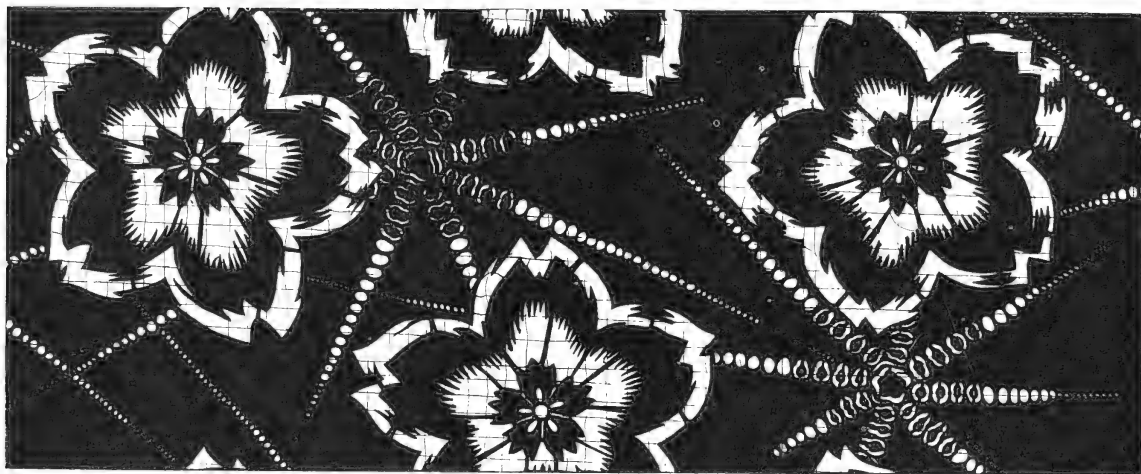
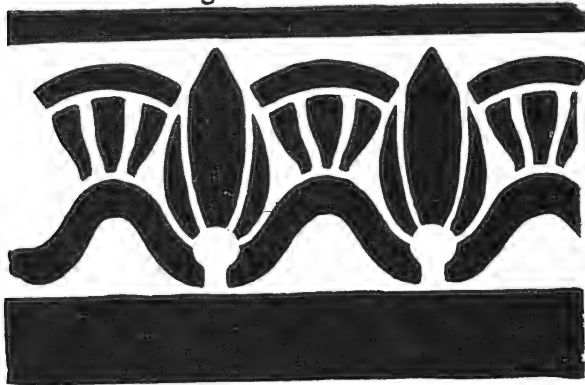


Fig. IV

strength to the stencil. Cover both sides of the paper with a coating of shellac. The common white or brown shellac dissolved in alcohol and ready for use can be purchased at any paint shop for about ten cents. This dries readily in about half an hour or less, and the stencil is ready for use. Fig. 3 shows the effect of this stencil. For brushes use a round stubby stencil, or a Brights flat bristle oil brush of about one inch in width.

From some flower, plan a unit for one of the following problems: A surface pattern, a border, a two or four sided symmetry. Cut out the shapes. Prepare the stencil. Lay it on a piece of white paper, holding it flat, and brush over the openings with black water color. Care should be taken to keep

Fig. V



the brush rather dry, for if it is too strongly charged the color will flow or blot. With a little experience a clear sharp impression can be made which will show the design in two values.

Prob. II—Use the same stencil in the two values "Dark" on "Middle," according to the value scale (see value scale page 128, October number). Lay a wash of grey, corresponding to the "Middle" value, over the entire surface of the design. When dry place the stencil on the paper and brush in the design in the "Dark" value of grey.

Prob. III—Use the same stencil and work as before, but change the values to "Low Light" on a "High Light" ground.

This offers three treatments of the same design and widens the experience as to the merits of the results. You will find

that one of the solutions will be better than the other two owing to a finer balance of greys. Balance here means unity of all parts. If any one shape in the design asserts itself, the design is out of balance. Every part must be so adjusted in contour, and value to its neighboring parts that a complete impression is given at a glance.

Fig. 4 is a Japanese stencil and shows the excellent work done by these people. To secure the delicate lines and forms with hardly a visible support, they make their stencils somewhat different from ours. They employ a firm paper, and cut the design through two thicknesses. The two sheets are then pasted together after a very fine silken open mesh has been placed between them. These silken threads are so fine that they do not interfere with the application of the color. The Chinese and Japanese use these stencils in hand printed fabrics.

Fig. 5 shows a border, stencil effect, of the Milk Weed pod.

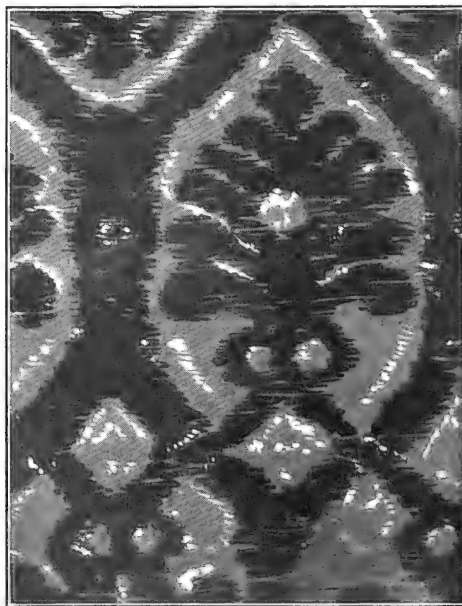


Fig. VI



DECEMBER, 1903
SUPPLEMENT TO
KERAMIC STUDIO

ELDER BLOSSOMS—MARSHAL FRY

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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KERAMIC STUDIO PUB. CO.
SYRACUSE, N. Y.

Fig. 6 is a reproduction in values of grey of a Genoese velvet of the XVI Century. Here too, we have the stencil effect, although it is a woven fabric. The carrying of the back ground through the pattern (as in a stencil) relieves tightness and offers an opportunity of greater color charm. This method of working is very characteristic of the Sixteenth Century.

Prob. IV—Make two tracings of the textile seen in Fig. 6 on Japanese or white paper. Paint in the first of these tracings in "Light," "Low Light" and "Middle" greys of the value scale. Paint in the second tracing in "Middle," "Dark" and "Low Dark" of the scale value.

Prob. V—As ceramic workers often deal with flower motives, it may be well to make Prob. V a review. Arrange in a rectangle ten inches on one side (the length of other side to be determined by the worker) some flower form similar to the fan design on page 127, October number. Use any three values of grey of the value scale. Look for the related direction of the long lines. Make the movement of every line, if continued, drop into the movement of some neighboring line. This is to bring about a rhythmic relation similar to that of phrasing in music. One group of related sounds grows out of the previous group and in its turn suggests the group following, thereby producing a rhythmic movement. The eye is strongly affected by this in art, just as the ear is similarly influenced in music.

Avoid many little shapes in a composition. If the flower is of the small variety, increase its size to get the right balance of areas. Try for the vigorous and the unusual in your work.



ELDER BLOSSOM STUDY—(Supplement)

Marshal Fry

FIRST Fire.—The first painting is done chiefly with green and violet. There should be plenty of violet used in the first painting, as it makes a foundation which qualifies the colors which are washed over it afterward and helps to harmonize them. Wash in the dark in the background and into this paint the forms very vigorously and crisply, leaving plenty of light in the flowers and light part of background as the tendency in subsequent paintings is to darken everything and lose the transparency. Use Violet No. 2, Albert Yellow, Fry's New Green, Shading Green or Brown Green. Leave the flowers very light and flat, reserving the detail for the next painting. When work is dry, dust with Fry's Gray Green, Violet No. 2 and Ivory Glaze (the latter used in the palest part of background, and over the flowers.)

Second fire.—Define flowers with mixture of Moss Green and Albert Yellow, and any accent on foliage may now be added.

The third painting consists of a thin wash of Sea Green to envelop the entire study in a tone of cool green. The wash over the flowers should be very pale indeed and also over the light part of background, but may be thicker over the dark green. When dry dust flowers and light part with Ivory Glaze and the darker part with Copenhagen Blue.

TREATMENT IN WATER COLORS

Rhoda Holmes Nicholls

Before dampening the paper, sketch the design in pencil or charcoal, not necessarily every detail but the composition and massing, so firmly that when the paper is moistened, and afterwards a ground color is passed all over it, it will still show in places. The colors to use for the grounding are Indigo, Anbucy's Blue, Aligarin Crimson and a very little raw Sienna, darkening it where necessary, with a sponge remove the color

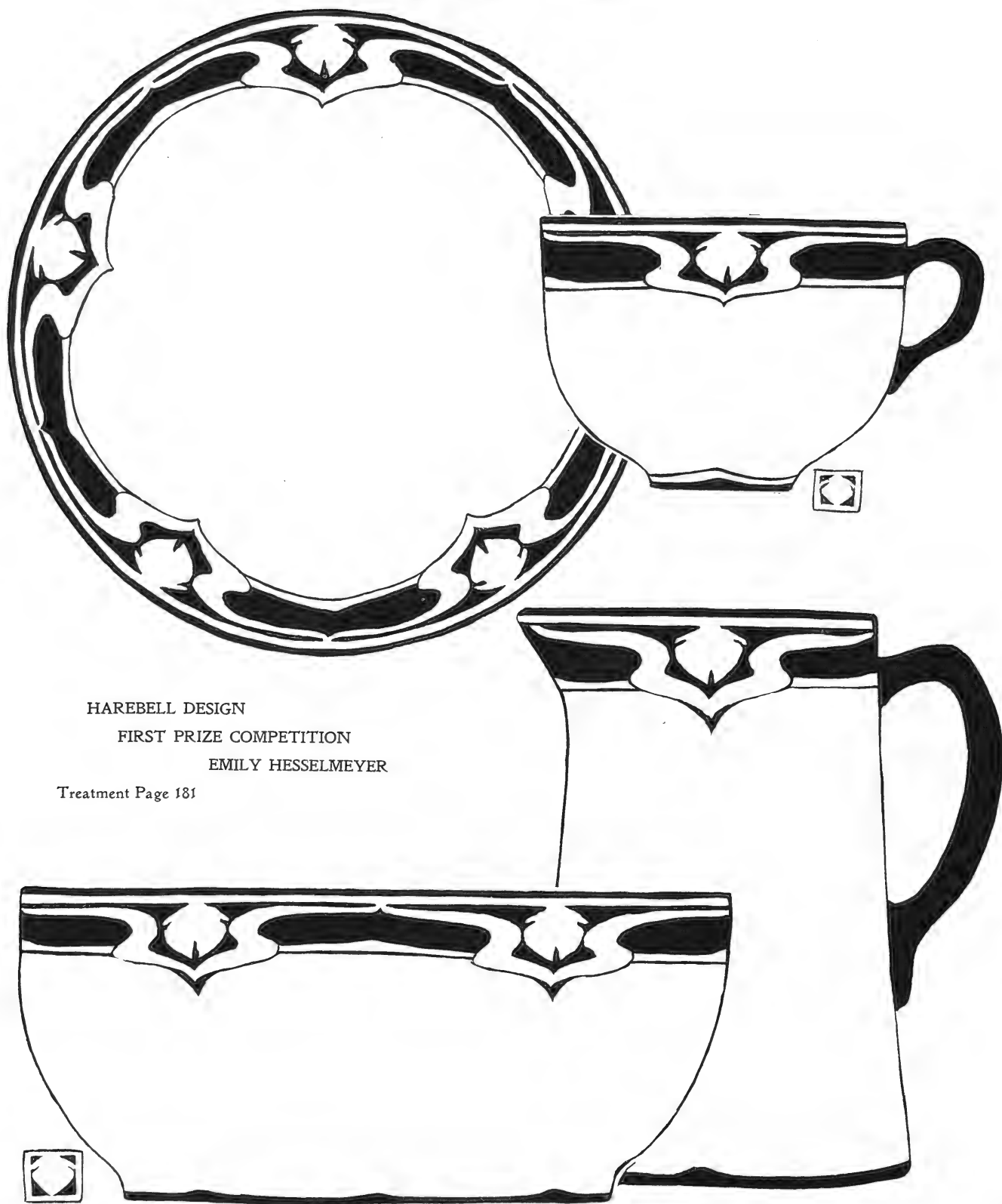
where the white flowers are to be, and as this begins to dry draw delicately the suggestions of the small flowers. The values must be carefully sought out, as there is little beside this to give the delicate rendering of leaves and stems, so much of the charm depends upon the quality of the color. It should be sponged down after it has quite dried, with a very soft sponge, and then worked into again, accenting the markings of the stems and giving little finishing touches to the leaves. If the sponge is not soft, the color will appear streaky, and if it is sponged before thoroughly dry, it will be spotty and uneven. The best way is to dry it thoroughly over a fire. Sometimes it is a good plan to take a large dry brush and drag the color together to get that much sought for finish called quality. Use Whatman's Not pressed paper 140lb.



TREATMENT OF HAREBELL DESIGN

Miss Emily Hesselmeier

THIS design is to be carried on in three tones of Copenhagen Blue, darkest parts not too dark. Or, blossoms and leaves bluish green, (Apple Green with a little Copenhagen Blue); background, or darkest part of design, Copenhagen Blue, balance of china a Pale Grey Blue tint. Outlines in gold.

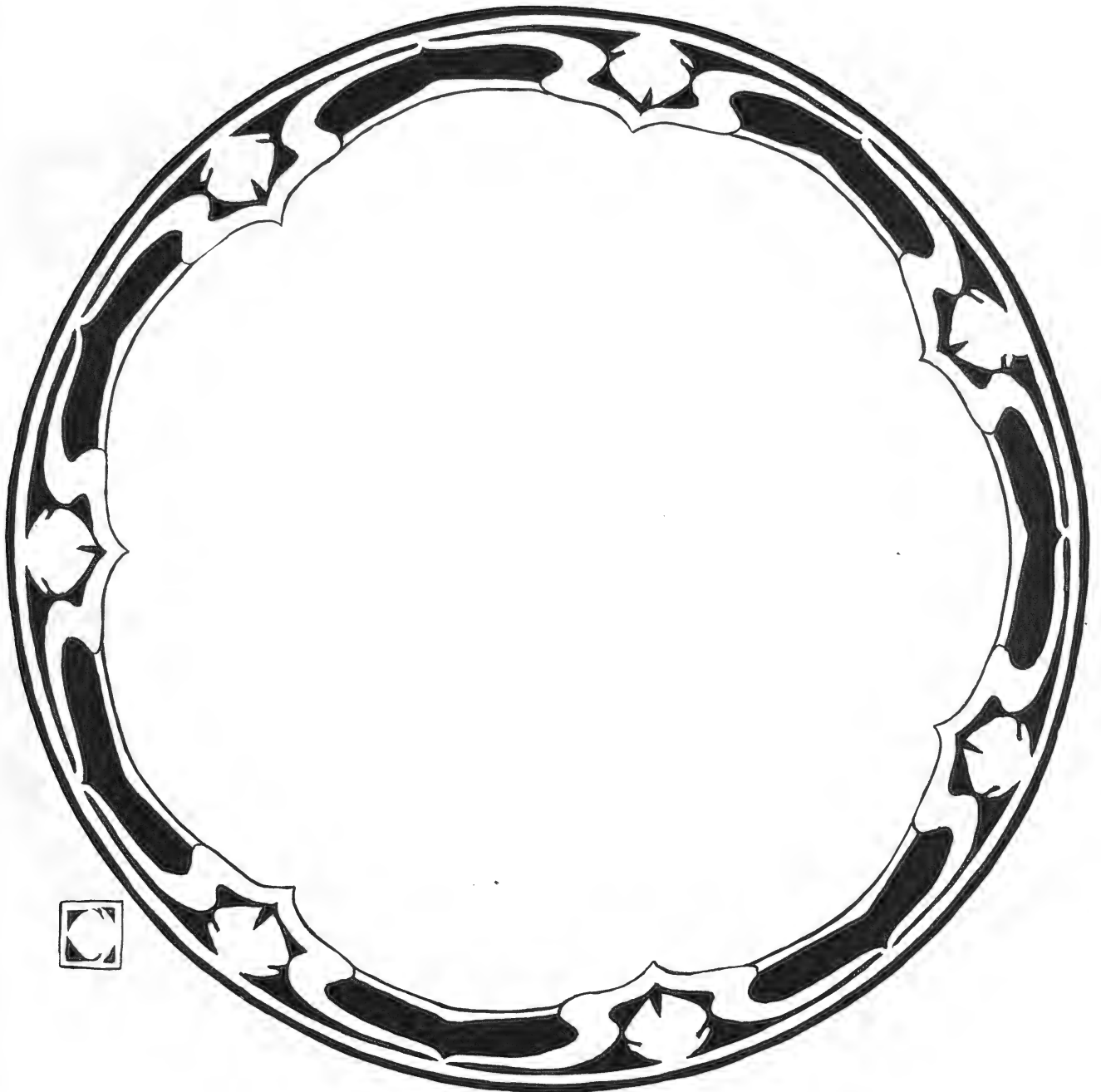


HAREBELL DESIGN

FIRST PRIZE COMPETITION

EMILY HESSELMAYER

Treatment Page 181



HAREBELL DESIGN—FIRST PRIZE COMPETITION—EMILY HESSELMAYER

Treatment page 181.



NATIONAL LEAGUE OF MINERAL PAINTERS

THE circulars concerning the St. Louis Exposition have been sent out to all the clubs, and it is hoped that work is being planned accordingly.

It was suggested by Mr. McGibbons, the Eastern Representative, that we should make application for increased space, as the League, standing for so many clubs throughout the country, should have an opportunity to be adequately represented.

This application has been made and we hope the space will be filled with the best work yet shown by the League. It must be remembered that this applies to the study course, the work being laid out on definite lines.

The coming meeting of the Advisory Board will be for the purpose of appointing committees for St. Louis, and making all the arrangements possible at present. We shall also discuss the feasibility of having the annual election in May, in New York, instead of St. Louis.

The League Exhibition is still on its travels and will be in San Francisco in December. It would be a great satisfaction if the different clubs would instruct their secretaries to send an account to the League of their impressions of the exhibition, their manner of installing it, and any other points which may give us information or be of interest.

IDA A. JOHNSON, President N. L. M. P.

STUDY OF HOPS

Mrs. Brame Van Kirk

THE hops with foliage are generally of a monotonous tone of vivid green. Changes in the season give the varied tones which increase usefulness for artistic decoration.

The hops may be seen as a cool pea green shading to darker greens (cool greens). Then they may be found in all the tones of brown when the hop begins to dry.

For green hops use Black Green or Dark Green strengthened with Black; for depth and for modeling, Dresden Yellow Green or any cool light green for light tones. For brown or drying hops use Yellow Brown to which is added either Brown Green or some of the Browns, as the case may be.

When the hops begin to dry the leaves of the vine also change; deepening to a black green, showing also brown in the decaying edges. Use the same greens as for hops, using tender fresh greens where the fresh leaves are desired.

EXHIBITION NOTE

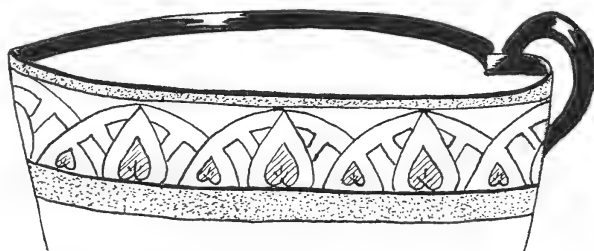
The 1903 Exhibition of the N. Y. S. K. A. will open at Hotel Majestic at 10 A. M. on Tuesday, December 1st, and continue until 10 P. M. Thursday, December 3d. Private view on Tuesday evening.

SHOP NOTES

We acknowledge the receipt of the following Catalogues: Designs for Pyrographic Decorations, F. Weber & Co., Philadelphia, Pa.

1903-04 Supplement to catalogue, Burley & Co., Chicago.

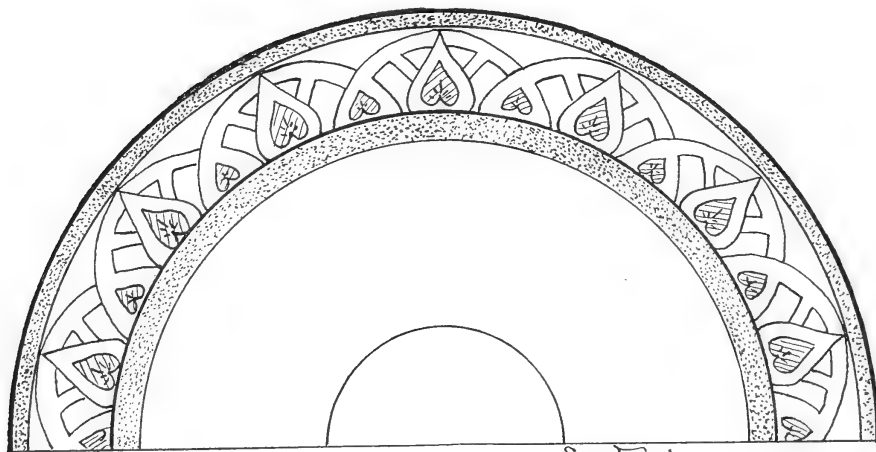
1903-04 Supplement to catalogue, Mrs. C. C. Filkins, Buffalo, N. Y.



CUP AND SAUCER

Sue Ennis

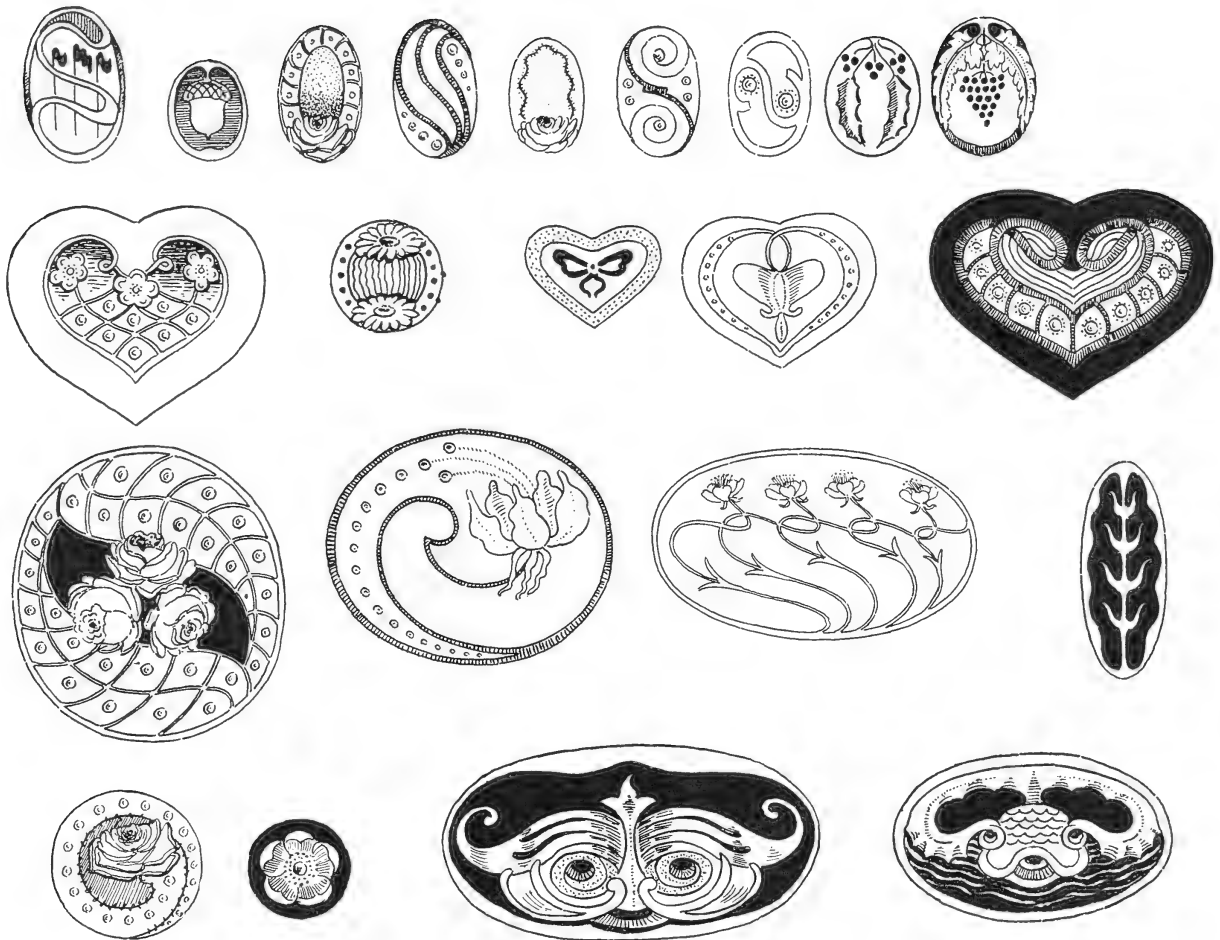
TINT cup in Ivory Yellow shading into Yellow Brown. Dotted border is of Deep Blue Green fluxed. Hearts are of soft carmine No. 2. Circular ornament in Sepia and Yellow Brown mixed to soft brown. Background to border is Pompadour and Ivory Yellow mixed to flesh color. Outlined in Gold. Gold handle and edge.



Sue Ennis.



PRIZE STUDY OF HOPS—MRS. BRAME VAN KIRK



DESIGNS FOR HATPINS, BELT BROOCHES, STUDS, BUTTONS, ETC.—EDITH ALMA ROSS

[Numbers refer to designs reading from left to right—Top row, 1 to 9 inclusive; second row, 10 to 14; third row, 15 to 18; fourth row, 19 to 22.]

- 1—Light green background, scrolls gold, flags white.
- 2—Acorn and edge are gold, the lines on acorn and background are black.
- 3—Border band light blue, center background dark blue shading to white, rose rich crimson, lines and dots on border band are raised gold.
- 4—Scrolls are gold, dots blue enamel.
- 5—Background cream color, rose and vine, shades of brown.
- 6—The entire background is gold, scroll is black, two dots in each side green enamel.
- 7—Scroll gold, outlined with black, blue enamel dots set in gold paste dot.
- 8—Leaves two shades of green, berries are red.
- 9—Leaves gold outlined with black, berries red, background light green below dark green above.
- 10—Background dark blue shading to light blue, all scrolls, dots, forget-me-nots, etc., are gold raised paste.
- 11—The band on edge is deep Rose du Barry, the inside background pink. The daisies are white enamel with gold center, all other lines, dots and edge are gold.
- 12—Gold border outlined and dotted with black and black bow knot.

- 13—The scroll and bleeding heart are pink with white enamel dots, outlined and shaded with gold lines.
- 14—Dark blue background, around edge, white inside with gold lines, scrolls and raised dots to enclose blue enamel jewels.
- 15—Behind the roses is very dark green, outside the roses are pale yellow, pinks, blues, etc., softly blended. Roses are pink, lattice and edge are gold, dots blue enamel.
- 16—The flower is brilliant scarlet, outlined with black with stems and edge also black, the background is gold, the dots white enamel with a touch of black under each.
- 17—Background pale blue, flowers, edge, all stems, etc., gold outlined with darker blue.
- 18—Black lustre ground, gold decoration and edge.
- 19—Dark center is dark brown, rose is shades of yellow, stem deep ruby brown, dots and edge gold.
- 20—Black background, white flower shaded with gray and gold dots and center.
- 21—Black background with dolphin in gold shaded with black, eyes are black and red.
- 22—Dark green or blue background with another gold enamel monster, wave lines are gold and markings on monster black.

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 6 Brevoort Place, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

SIMPLE FURNITURE

IV—FINISHING

Elisabeth Saugstad

THIS is an exciting, interesting and anxious time, for in spite of fine wood, good design and true workmanship, the right kind of finish is of great importance, and an otherwise beautiful piece of furniture may be quite spoiled by ill colored, muddy stains and cheap looking, shiny surfaces.

The objects in finishing are to protect the wood from changes in the atmosphere, by filling the pores and covering the surface; to protect it from marks and bruises, for unfinished wood soils and dents more readily and is more difficult to clean; to lessen the chances of chipping and splintering; to make it more agreeable to the touch, and to bring out the beauty of color and grain.

In the ideal finish the color is clear, transparent and mellow, not clouded and streaked, or as if the pores were filled with a dark sediment; the wax is rubbed in and the shellac or hard oil is rubbed down until they seem more in the wood than on it; the lustre may be soft or bright, but never shiny like glass, nor does it feel like glass, but smooth and satiny under the fingers.

Volumes innumerable have been written on the subject, so I can only hope to put the beginner on the right track for experiments on his own account, and give him some simple directions and recipes which I found satisfactory. Everything should be tried first on small pieces of the wood to be finished until the exact color and effect desired are attained.

The simplest and most satisfactory process for darkening oak is by fuming, which is really but a hastening of the natural way. The piece of furniture is put in a large box or closet and saucers of *concentrated ammonia* are placed on the floor around it. All cracks should have paper pasted over them, even a closet door unless very close fitting. Twelve hours ought to give a mellow, medium tone, and two or three days may be required to make it very dark. It does not look much darker until oiled, and several small pieces of wood should be put in so that the progress may be tested on them from time to time. When dark enough it is finished by oiling and waxing. A little green paint, ground in oil, mixed in the wax gives a charming bronzy tone over the brown of the fuming.

There are two kinds of stains, oil and water. The latter are more transparent, more like dye, while the oil stain seems more on the surface, and the particles of color, not being in solution, settle in the pores, especially in woods like oak and ash where the porous grain alternates with smooth, hard surfaces. On soft woods like pine and white wood it does very well, being more uniformly absorbed. The chief difficulty with water stains is that they raise the grain, which makes it necessary to go over the work again, lightly, with fine sandpaper, taking great care not to take the color off in spots, or on the edges, which it is easy to do and hard to retouch again satisfactorily.

The three following recipes come under the head of water stains:

A good brown one is made by putting a couple of handfuls of rusty nails, tacks or iron filings in a quart of vinegar. It should stand for a week or so and be occasionally shaken. It keeps indefinitely, but grows darker with age. It should be applied evenly with a brush or rag, and when it is dry, oiled. It is a particularly good brown for ash, simply waxed after the

oil is dry. Several coats of a very strong solution will blacken oak, if it is washed over with a strong boiled decoction of tea leaves, oiled, filled with a black filler and waxed.

Tincture of iron makes a good green stain on oak and ash, then oiled and waxed.

A stain for giving the tone and color of age to light, new mahogany is made from a saturated solution of Bichromate of Potash—about 4 ounces to a quart of water. One part of this to 3 of water gives a deep reddish tone when it is oiled. A stronger solution or two applications of course darken it more. After oiling it may be waxed, several thin coats, and vigorously rubbed; but I think that shellac or hard oil bring out its lights, color and grain better. When so finished a mahogany filler follows the oil.

Boiled linseed oil thinned with about a third part of turpentine, which makes it dry more quickly, is used for simply oiling, well rubbed in with a brush or rag. It should dry at least 24 hours. This is the best way to treat walnut, using wax as a polish. If the walnut is grayish or dull in tone, mix a very little Burnt Sienna in the oil or wax.

The oil and turpentine mixture is the medium into which colors are mixed to make oil stains. These colors may be the powdered ones, those ground in oil which come in small tin cans, or artist's tube colors. Black, Burnt Sienna, Van Dyke Brown, Burnt Sienna and Deep Chrome Green are the best of the first two kinds. There is a wider choice of better colors in the last.

The green can be modified to a pleasant gray tone by the black, or to a warmer more bronzy color by the browns. The Burnt Sienna will give a reddish tone to the browns, and vice versa. The black is only useful in modifying the others.

Fillers are used to fill up the pores and so make a harder, more even surface which takes a smoother finish. It is always advisable to use them under shellac or hard oil. When wax is used it acts as filler itself, unless the wood is very coarse grained. It is best to get a ready made filler for the kind of wood to be finished. It is rubbed in, *across the grain*, with a pad; allowed to get slightly sticky, then rubbed off with a bit of excelsior or burlap.

Wax is the simplest, easiest and most satisfactory polish for most woods that a beginner can use, and it is both inexpensive and artistic.

To prepare it, melt yellow beeswax, about 4 oz. will make enough for several pieces of furniture, in a vessel in hot water, or on the back of the stove. When it is liquid take away from the fire and stir in an equal quantity of turpentine. When it is cold it should be about the consistency of soft butter. The object is to have it sink into the wood, fill the pores and leave a film on the surface which will take a good lustre.

The piece of furniture should be rather warm when the wax is put on, which may be done with a rather stiff brush or a rag that is not linty. It must be put on thinly and evenly and well rubbed in. After it has dried, which will take several hours, it is ready to be polished with a soft flannel cloth (not linty), an old silk handkerchief or piece of chamois. For a simple work this will be sufficient, but if a finer finish and brighter lustre are desired, more coats will be necessary—and the more rubbing the better.

Shellac is a good finish where there is no danger of dampness, as it is apt to turn white under such a condition. It is not

as difficult to apply as most forms of varnish. It should be put on very quickly with a full brush and not dragged where it has begun to set, which it does almost at once. It takes some experience to put on a smooth, thin coat. Two or more coats are necessary, and it should dry at least 24 hours between. The first coats are rubbed down with 00 sandpaper, very carefully and evenly, and the last with fine powdered pumice stone on a pad moistened in oil, to a soft lustre.

Hard oil is probably a better finish, but more difficult to reduce to a soft gloss. Three or four coats are necessary and it should dry three or four days between each—a week is better. Emery flour and water or crude oil are used for rubbing down

each coat. And it must be thoroughly rubbed down, and shellac also, so there seems to be only a film on the surface and not a thin sheet of glass.

When furniture is painted, and some porch and bed room furniture looks very well so finished, it should have three or four coats, not thin enough to run nor thick enough to be uneven. Each coat, after thoroughly drying, should be rubbed smooth with pumice and oil. It is a good plan to put a little drier in the paint. If enamel paint is used as a last coat it should also be rubbed down to an eggshell gloss. Sealing wax red, a good leaf green, a grey-green and ivory white are the best colors for painted furniture.



Fig. 1.

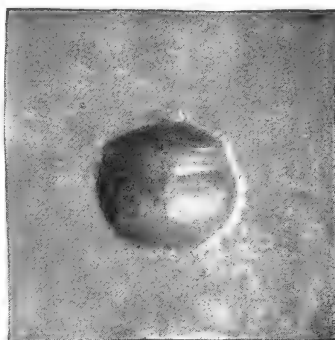


Fig. 2.

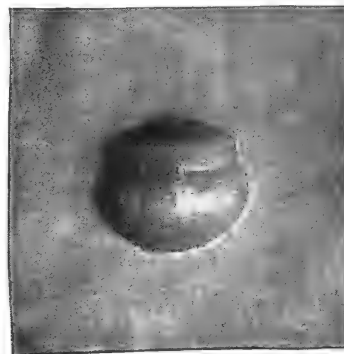


Fig. 3.

REPOUSSE—EMILY F. PEACOCK

REPOUSSE, or modeling in relief, is produced by beating with a hammer and steel tools on the back of sheet metal fixed on cement or some yielding material. If only slight relief is required it can be obtained by beating the metal on wood or a block of lead, but for general work the cement is better.

After the metal is annealed and the design outlined fix it on the cement and holding the tool as in Fig. 1 begin to work, using a large tool with rounded ends. Get the relief gradually, let the blows be even, one directly following another so that the result of your work will be a continuous surface. Students should practice until the trace of the tool in the metal is smooth and the lines from the tracer even and without a break. Hammering metal makes it brittle and in that condition it is likely

to crack. At frequent intervals it must be heated and removed from the cement and annealed. This softens the metal and allows it to yield more easily to the blows of the tool. Heat the cement by passing the flame over it and put the metal back on the block. Also while you are working keep the metal about the warmth of the hand by applying the flame occasionally to the surface. This prevents the metal from curling up. Fig. 2 shows a little depression in the metal. Figs. 3 and 4 more. In Fig. 5 the metal is turned over and the hollow side filled in with cement. Turn this quickly on the block. Now the metal is ready to model and if much detail is required it should be finished like Fig. 6.

We are indebted to Pratt Institute for these illustrations.

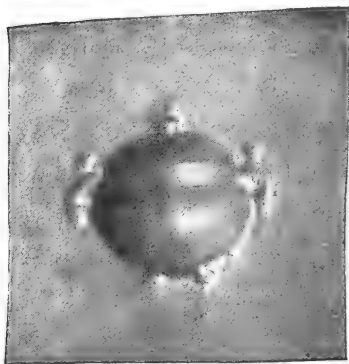


Fig. 4.



Fig. 5.

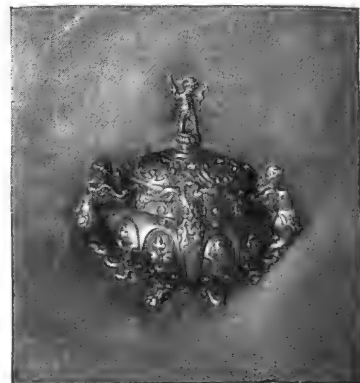


Fig. 6.

A COILED BASKET—LAZY SQUAW'S STITCH

Mrs. Hugo Froehlich

PLAN a small simple shape for the first coiled basket. Soak a No. 4 rattan reed *a b*, Fig. 1, so that one end may be coiled very tightly. Wrap this end with one strand of raffia about three fourths of an inch. The other end of raffia is to be threaded in a No. 19 tapestry needle.

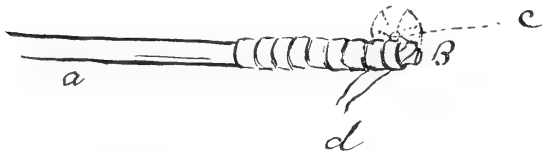


Fig. 1

Coil end *b*, Fig. 1, back to meet *a g* at about *c* and fasten end firmly with a few stitches of the raffia.

After a few trials this can be done easily and well.

When firm wrap raffia once around rattan, Fig. 2, at *e*, take one stitch through both coils at *f*. Wrap around coil at *g* and with binding stitch around both coils at *h*. This last

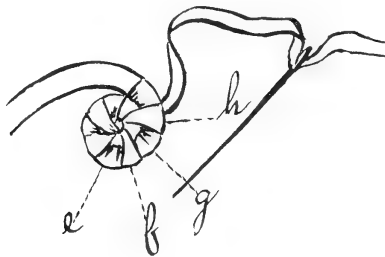


Fig. 2

stitch is the means of binding both coils firmly. Continue with one wrap or short stitch, and one binding or long stitch, always allowing the long stitch to be taken over the short stitch of previous coil as in Fig. 3. Take the stitches toward you as shown in Fig. 3.

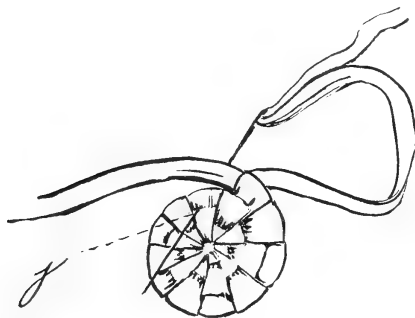


Fig. 3

It will be a matter of choice as to the direction of working. Some will work better from left to right because the rattan is more easily managed in that way.

As the circle increases it will be necessary to add more

stitches, but this will make no difference in the regularity of stitches, if a long and short stitch are added together.

If color be introduced be sure to have a simple design, such as one or two bands of only one color. A Maltese cross at regular intervals or a small triangle connected by bands makes an effective border.

Insert the colored strand by laying it along rattan about one inch before it is to appear in the pattern. By working the other natural raffia over it the colored strand becomes firm and can in turn bind the natural raffia. If color is to be a solid band, cut natural raffia after it is firmly fastened and introduce, when needed, following the process just as described.

The shaping of these baskets is not difficult. To form the flare, bind each subsequent layer to previous one just a little to the outside and top of it. When another rattan reed is needed add it by splicing them. Cut enough from the end of each reed, about three fourths of an inch and make them fit as one reed when laid together. Notch them once or twice and bind firmly with a fine strip of raffia. There is no need of planning a special finishing of the top as the Lazy Squaw stitch is in itself a finish.



ANSWERS TO INQUIRIES

Mrs. J. A. R.—The tools for wrought leather can be purchased through the Guild of Arts and Crafts, 109 E. 23d street, N. Y. They range in price from 40 to 50 cents.

F. W. L.—Can I buy brass lamp shades ready to decorate? Lamp shades of brass or copper can be bought from a metal spinner, give him the required dimensions, and the gauge of metal you want. You could also cut the shade out yourself, and take it to a tinsmith, he would make the seam, and finish the top and bottom.

T. M.—Background tools for wrought leather work are made of steel. These can be made by a die-cutter from designs of your own.

M. W.—How can I unsolder a piece of work? Paint those joints that are not to be unsoldered with a mixture of red clay and water. This will protect them. When thoroughly dry, scrape the portions next to the part to be unsoldered, and paint with borax. Then give just enough heat to melt the solder and remove the part with pincers.



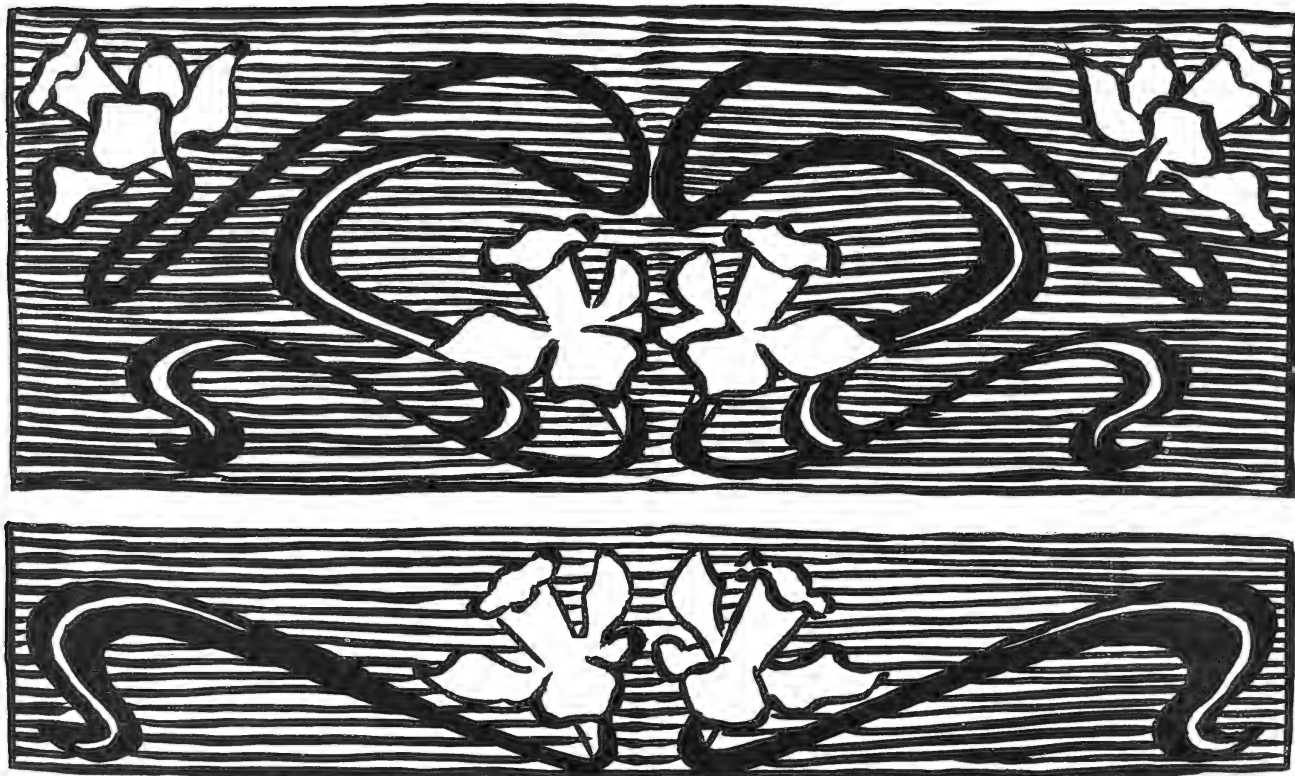
PYROGRAPHY

TREATMENT OF GLOVE BOX—(Page 190)

Katherin Livermore

BURN outlines; make a decided contrast between the inner and outer backgrounds; keeping the inner one very delicate rather than using the heavy lines indicated—a point stippling would be preferable. The outer one may be burned as heavy as indicated.

Use gamboge to color the flowers and Sap Green for the leaves—put a flat wash on and when perfectly dry, shade the flowers and leaves very delicately with the hot point, using line shading; the effect of the burning over the color is very harmonious, but can only be done when water color is used.



GLOVE BOX—MIRIAM SAUNDERS

Treatment Page 189

ANSWERS TO CORRESPONDENTS.

Mrs. C. G. H.—The teak wood stands so much used for punch bowls and vases in the N. Y. Society exhibits are bought at Vantine's, Broadway, N. Y., or in some Chinese store. As you are in Oklahoma it would be easier to send to Seattle or San Francisco or some Pacific coast town where there are Chinese shops. If your enamel has little black specks after firing, the paint or oils have been mixed in some way with something injurious, which has gotten into brush or palette before firing. Fire your enamels in the hottest part of kiln and pinks in the coolest spot if you want both fired right at the same time.

Mrs. H. C. B.—We could not tell what the trouble with your liquid bright gold is unless we saw you mix it, if it rubs off it is probably underfired. Are you sure you followed directions *exactly*?

P. E.—Lustres can be used over paint and paint over lustre but it is always best to fire the one before going over it with the other.

We have been informed that we were mistaken in saying in the last K. S. that lustres were all made by one European firm, there are three firms who send to this country and some lustres are manufactured here by Sartorius and others. In stating that all lustres were about equally good we spoke only from our own experience, there may be some made which are not so good but we have not used them.

A. A. L.—If your Coalport green came out with a high glaze, that is as it should be; if, when you used it before, it came out matt, that was some fault in the firing. If you wish it matt we can only suggest to go over the dish with some matt green.

L. W.—A faience or pottery body needs a much higher fire than can be obtained in an overglaze kiln but the amount of temperature depends upon the mixture of the body used, the colors are sometimes mixed with gum tragacanth and water, sometimes with fat oil and turpentine.

Lustres come ready mixed with medium, if they thicken, add oil of lavender. Lustre grounds are laid with a large square shader, add a little oil of lavender so that the color will not dry before blending with a silk pad, if a light tint is desired, otherwise let it blend itself, ordinarily no more medium is necessary beyond what is already mixed with the lustre as it comes. Lustres

have been treated so fully at different times in K. S. that we cannot take the space for an essay on the subject, but any questions will be answered. Unfluxed gold can be used over well dried unfired paste but better results are obtained by firing paste first.

Mrs. H. M. S.—Flux is used with colors to assist the glaze. The powdered flux is to be used with powdered colors, $\frac{1}{4}$ flux should be added for painting and $\frac{1}{3}$ for tinting, to all colors except pearl grey, mixing yellow and apple green. If you wish to use powdered flux with tube colors, first mix with medium to the consistency of tube colors then add to color in same proportions, fat oil and lavender oil make a good medium for powdered Aufstezweis, just enough fat oil to hold powder together, then thin with lavender, for powder colors use Copaiba 6 drops to clove oil 1 drop.

A. W.—Color can be used over fired gold and if heavy enough the gold will not show through as in outlines, if too thick the color will blister and flake off, if too thin the gold will show through with a bronze effect.

The treatment of wild carrot study by Miss Mason will be found in the August number of K. S. The stein by Mrs. Safford in November number can be dusted twice if the black does not come out strong enough after first fire two kinds of silver can be used, the liquid bright silver and the burnish silver, but a richer effect is obtained by using the burnish silver entirely and burnishing it where necessary. If you used Delft Blue instead of black the Carnation tint at top could still be used but a deep cream would be better or a light grey green. Always use for background of naturalistic studies the same colors as used in the study itself. The colored glazes mentioned are in powder and are usually dusted on to the half dry or dry painting rather than mixed with the colors.

In the directions for firing the oil kiln we say watch your chimney, advisedly. We mean just what we say—if your house is so built that you can not see the chimney that is a sad disadvantage. We do not say "watch the smoke" because as soon as the chimney smokes it is time to turn off some of the oil—the chimney ought not to smoke if you are burning just the right amount of oil, you do not get any more heat by forcing the oil beyond the point where it is fully consumed before passing up the chimney.

The little hole at bottom of door is for convenience in cleaning the kiln.

KEEP THE FIRE ALIVE

KERAMIC STUDIO

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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Some Leading Agencies of Ceramic Studio

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KERAMIC STUDIO

Vol. V, No. 9

SYRACUSE NEW YORK

January 1904



N view of the approaching exhibit of the National League of Mineral Painters at St. Louis the exhibition of the New York Society was not a little disappointing. Two or three only have fulfilled the promise of last year. A smaller number than ever before exhibited, and few were striking out on individual lines.

Apart, however, from this consideration the work generally was encouraging as it showed, in almost every instance, a striving for better art in design and color. The detailed account of the exhibition will be of necessity postponed until the February number on account of the difficulty in procuring illustrations in time for this issue.

It is hoped that the League work, at least, will make a more impressive showing than that of the individual worker, otherwise all the trouble of having overglaze decoration judged under the art section will have been in vain.

It was also a matter of disappointment that so little pottery was shown. However, the Society is to be congratulated, in that the really talented members are willing to take so much trouble to prepare an exhibit, for the influence it may have on the other workers. Surely that is their only reward, for such work is lost and out of place in a fashionable hotel.

After all, there is no reason for despondency in respect to Ceramic decorative art. When it is considered how few really good pictures are hung at the annual art exhibitions, there is cause for congratulation, that proportionately to the number of exhibitors, the good work is much more in evidence at the New York Society's display.

SPRING COMPETITION

Open to every one—closed March 15, 1904

I. Decorative Study of a Flower subject. First prize \$25.00, second prize \$15.00.

This calls for an arrangement of some flower form in a panel 9 x 12, executed in India ink, wash drawing, flat tones with or without outlines. Special attention is called to the decorative lines of the plant growth, avoiding too much detail, and to an agreeable division of the space. This study must be accompanied by a pen and ink detail drawing of the flower and an application in 2 to 5 colors to some ceramic form other than a plate. Use a smooth water paper for the wash drawing and color scheme and Bristol board for pen and ink work.

II. Design for Child's Set of 3 pieces. First prize \$15.00, second prize \$10.00.

This may be either a bread and milk set of bowl, plate and mug or pitcher, or wash bowl, pitcher and rectangular tray. To be executed in India ink on Bristol board and accompanied by a color scheme of 2 to 5 colors.

III. Design for Tiles for fire-place and hearth in child's room. First prize \$15.00, second prize \$10.00.

This may be either a design fitting the fire-place or a single tile design and border for repeat. To be executed in wash drawing and accompanied by a color scheme in 2 to 5 tones.

IV. Tile design for Teapot or Flower pot stand. First prize \$6.00, second prize \$4.00. To be executed in black and

white and accompanied by a color scheme in 2 to 5 tones.

The jury reserves the right to withdraw any prize for which there is no sufficiently worthy design.

A symbolic treatment of the child subjects is suggested.

No one is excluded from the competition. Non-subscribers, foreigners, former prize winners, are eligible. Mark with fictitious name or sign, same to be on envelope enclosing name and address of competitor. Designs must not be traceable to any existing pattern. All work submitted should be mailed flat. Designs receiving mention will be considered for purchase.

If each design is made separately and not overlapping another, it will be more likely to attract favorable attention. Strive for simplicity and appropriateness of design. Any number of designs can be submitted by one person.

Special attention will be paid to shapes of dishes decorated.

Designs from foreign countries should be sent by mail, not by express. Registering insures perfect safety of mail delivery.



AT the last Advisory Board meeting of the League, the business connected with the St. Louis Exposition was transacted as far as possible in the absence of definite dates. Circumstances require committees for both St. Louis and New York, and Mrs. Ralph Buchanan of St. Louis was elected to act in that place, other members to be added to that committee later.

The present Transportation Committee, Mrs. S. E. Price, Mrs. L. Vance Phillips and Mrs. W. C. Hibler, will act in New York. Mrs. Worth Osgood was made Committee on Cases.

Members will please take notice that there will be two classes of work in the League exhibition, one consisting of work done on the lines of the study course, to be installed in the Liberal Arts Building, and the other of original pieces which must be submitted to the official committee. This exhibition will be installed in the Arts Building. This committee is as follows:

New York—William Couper, John La Farge, Frederick S. Lamb, Louis C. Tiffany, Stanford White, Douglas Volk.

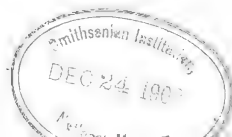
Philadelphia—Herbert E. Everett, Gustav Ketterer, Miss Emily Sartain.

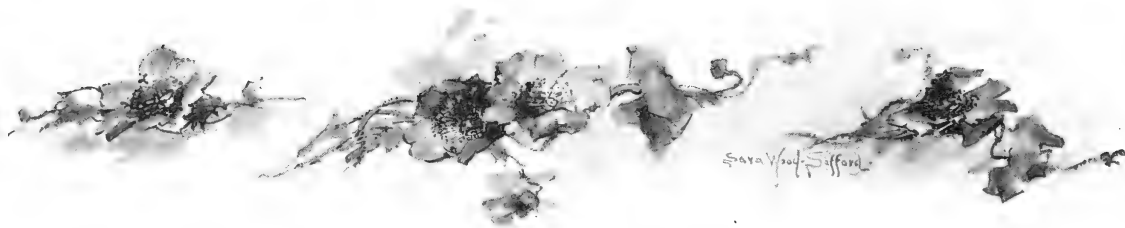
Boston—J. Templeman Coolidge, Mrs. Sarah C. Sears, C. Howard Walker.

Western—Charles Percy Davis.

We are unable as yet to secure dates, but members are urged to hold themselves in readiness as this committee will probably not meet later than February.

IDA A. JOHNSON,
President N. L. M. P.





TREATMENT FOR POPPY DRAWINGS

Sara Wood Safford

THE light poppies may be painted in very tenderly with Carnation, leaving some almost white lights upon the petals. A touch of Violet with the Carnation will make a soft warm grey tone for the shadows. Blood Red and Ruby may be used for the darker flowers for the first painting and in the second working, Carnation may be washed over the dark color to give the brilliant effect.

Use some very fresh greens in the buds and small leaves. Apple Green and Blue Green for the brightest parts, greyed with Violet for lower tones and where a mass of foliage is suggested. Violet Shading Green with a touch of Black will be found a good deep harmonious color.

Use Violet and Black in the centres of Dark Poppies and in the lighter ones, Violet and Dark Green.

If the worker wishes to have white poppies, Violet and Yellow will make a soft grey for shadows, but if pink is used in another flower of same group then use Carnation with Violet in some of the shadow tones.



THE MANUFACTURE OF DELFT

IN the year 1649 the first factories were established for the manufacture of pottery at Delft, in the province of South Holland; followed shortly thereafter by the establishment of other factories in several different cities. The product of these factories received the name of Delft ware and soon found its way over the larger part of Europe; in fact, as early as the year 1667, in the town of Delft alone, there were twenty-eight pottery factories, the number increasing to seventy at the end of the nineteenth century. The productions meeting with the most favorable impression and sale were those in imitation of Chinese and Japanese porcelain.

Nothing in business is more uncertain than the demand for articles of luxury, and during the fluctuations of trade two

young pottery makers of Delft went over to England and introduced the ware in that country; this, in turn, was improved upon by Wedgwood to such an extent that in 1770 he founded an entire manufacturing town—Etruria, in Devonshire.

From that time the manufacturing of pottery was introduced and experimented with in England and Delft ware became more and more forgotten until its manufacture almost ceased. But the ordinary wear and tear of a century caused the original Delft ware to become rather rare, and thus it became a desirable antiquity. This was the cause of a recent revival of the industry, and in 1877 an establishment was once more opened for the manufacture of this ware at Delft. Its success was soon an assured fact. The new productions were fine in form, artistically painted in blue cobalt, after the paintings of the old Dutch masters. The Delft ware regained the old time renown and became again an object of demand, not only in the Netherlands, but abroad.

The example given by Delft has already been followed by Utrecht, Puemerend, Gouda and Makkum, where factories have been established; and the manufacture of sculptured pottery, which flourished at Lemmer in former days, has again been taken up in that city.



BROOKLYN EXHIBIT

THE annual exhibition of the Brooklyn Society of Mineral Painters took place at the Pouch Gallery, Tuesday and Wednesday, December 1st and 2d. The standard of work shown by this club is higher from year to year, and this exhibition has been no exception.

The value of study and work along definite lines, is evidenced by marked advancement in the work of several members.

Miss Johnson and Mrs. Osgood had an interesting display of pottery made at Ipswich and Alfred, respectively, as well as many charming conventionally decorated pieces.

Many other members showed interesting work but lack of space and illustrations prevents going into detail.





POPPY DESIGN—SARA WOOD SAFFORD

GRAND FEU CERAMICS

VIII.—Kilns

Taxile Doat

KILN is the ceramist's main implement. Neither the ceramic artist nor the professional can do without it. Only amateur potters will be satisfied with using the ordinary kiln, the kiln of somebody else, because they have not the courage to do the work themselves, or because they are ignorant of the construction, or fear the difficulties of handling a kiln.

Without any reservation I will introduce my readers to the details which belong to the successful working of the kiln, but will not speak of all the trials which I had to make in order to solve the numerous technical questions which I long ignored, for, though in the center of the Sèvres establishment, I was confined to decorative work, and paralyzed by the "*Everybody in his place*" rule of large manufacturing centers.

Kilns, the history of which it is useless to give here, have varied in shape according to the centers of ceramic production: horizontal, semi-cylindrical and with up draft in China; vertical, cylindrical, with up or down draft in Europe; horizontal, square and with up draft in certain parts of Central and Southern France; vertical, cylindrical, some with up draft, some with down draft in the Sèvres factory, which however possesses a square kiln with two fire mouths and down draft.

Whatever the shape, and whatever the country which uses it, a kiln is invariably composed of three parts: the fire mouth, the firing chamber and the chimney for the escape of smoke, flame and of the gases formed by combustion.

All the vertical or cylindrical kilns of Sèvres and most kilns in Limoges and Europe contain two superimposed chambers, simply parted by the vault of the lower one. The upper one is called the baking chamber, and in this chamber the ware is subjected only to an imperfect firing, called hardening or baking. Each chamber of the kiln has its own door.

Grès kilns, which are generally horizontal and square, have no baking chamber. There was none in the kiln used by Carriès. The vertical porcelain kiln of Chaplet and mine have none. The former is with up draft, mine with down draft. The baking chamber is not necessary, but it has the advantage of making possible, with the same fuel and at the same time, a double operation: the grand feu firing of the pieces which are ready for it, and the baking of pieces for the next firing, as in the baking chamber the heat reaches only 830°C., while in the firing chamber it may register 1470°C. or more.

There is no fixed size for kilns. This will vary according to the needs or wishes of the potter. Grès and porcelain can be fired in a kiln having only 32 inches diameter and 28 inches height from the floor to the crown, and with only one fire mouth, as well as in the gigantic industrial constructions measuring inside over 12 feet in height and 15 feet in diameter, and having ten fire mouths all around.

The firing can be done either with coal or wood. If only white porcelain and grès are to be fired, one may use coal, the economy of which is manifest; but if the pieces are decorated, economy is no more an advantage, as the gases from coal are injurious to colors. All trials made so far with coal for grand feu colors have given either bad or comparatively inferior results. I have had a painful experience with this in the kilns of the Parisian suburbs. Orientals, not knowing coal, use wood. Limoges, Germany and England use coal. The three

factories of Copenhagen, Berlin and Sèvres, which make grand feu decorations, fire with wood.

Notwithstanding my first disappointments, when I resolved to do my own firing, I constructed a kiln with fire mouths for coal. From 1879 to 1894 I had my pâtes sur pâtes fired at a large Limoges factory. I used to send them to Limoges, after baking, well packed in sawdust in boxes. But as I knew that I could do better and more, I decided in 1895 to construct my first trial kiln, notwithstanding my limited resources and the consciousness of the difficulties which would assail me. I had to face the following problem, which will also have to be faced by all isolated artists. Having received my experience in the execution of decorative compositions on porcelain, I had to become initiated, at the lowest possible cost, to the technical difficulties of the different processes which belong to the production of grand feu ceramics, and to acquire the necessary skill in each of these processes: turning, modeling, coloring, plaster moulding, glazing, chemistry and firing. To solve this problem, I constructed on rue de Bagneux, in Paris, the small coal kiln of which I will speak (Fig. 31, 32, 33, 34, 35.)

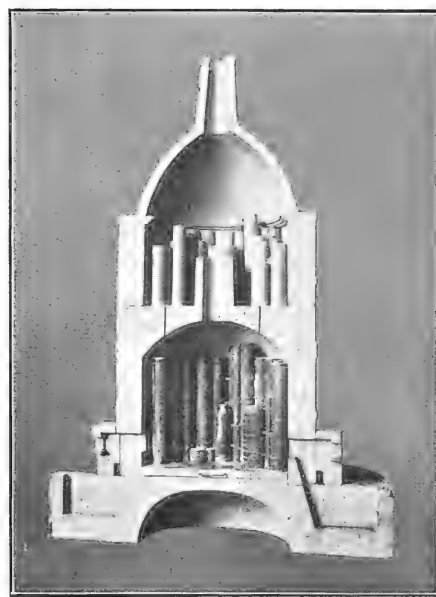


Fig. 76. Plaster model of a porcelain kiln built in 1835—up draft—four fire mouths.

Cylindrical, with vertical axis and up draft, having both firing and baking chambers, and three fire mouths for coal, this kiln was ideal from the standpoints of easy handling, rapid firing, economy in construction and especially in fuel. It was during three years my field of study. By practicing with it, I learned by my own experience, the best of all, to conduct a firing well, to make good saggars, to become familiar with the thousand precautions needful in the placing of a kiln, and with it I decided upon the final adoption of the ceramic bodies which I use to-day.

With the plans, sections and dimensions which I give*, anybody who wishes to obtain the results which this kiln gave me, and to spare, not time or labor, but money, will find it easy to build. Artists in better circumstances will probably prefer to do without this trial construction.

*We reproduce the cuts such as they were sent by Mr. Doat with French terms and measures. The measures are in metres and decimal fractions of metres, which can be easily converted into inches, one meter being equal to 39.37 inches.

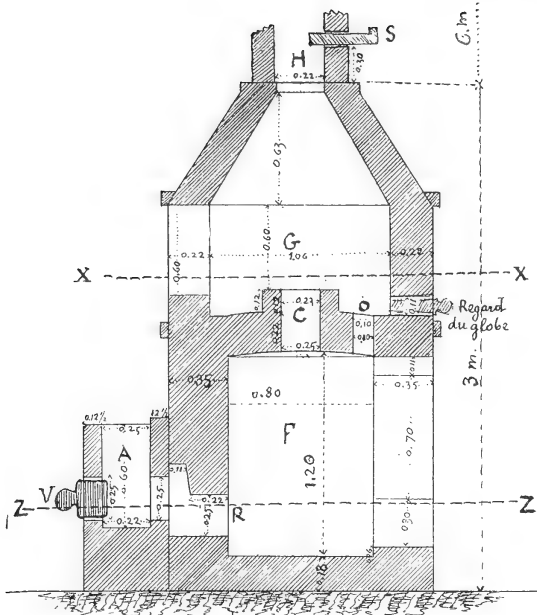


Fig. 31

Four à la houille

Four, kiln. Houille, coal. Regard, spyhole. Ferrures, iron braces. Largeur, width. Epaisseur, thickness.

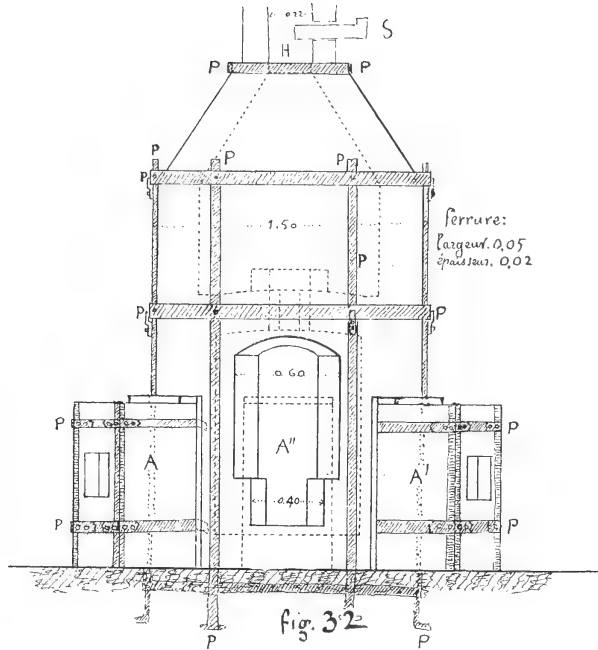


Fig. 32

Four à la houille.

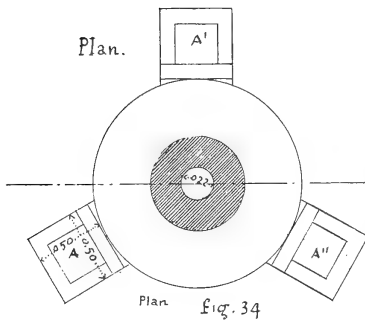


Fig. 34

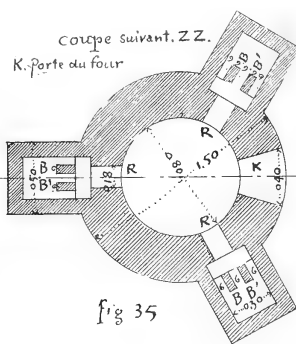


Fig. 35

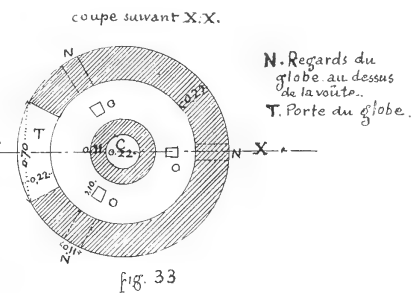


Fig. 33

Coupe, section. Porte, door. Voute, vault. Globe, baking chamber.

The firing chamber F ends in a spherical vault pierced by square openings (Fig. 31 and 33), and a central chimney, through which the lower chamber, where the firing of porcelain is done, communicates with the upper chamber G, where the baking is done. This upper chamber is surmounted by a cone ending in a rectangular or cylindrical flue H placed in the axis of the draft, to allow the escape of the products of combustion; it is the chimney.

At the bottom of the firing chamber are symmetrically placed the three fire mouths A, A', A'' (Fig. 34). In R (Fig. 31 and 35) are the openings through which the flame enters the kiln. The relation between the surface of these openings and that of the openings O and C for the entrance into the baking chamber, is 3 to 1 according to the rule.

The progress of the firing is watched through only one spyhole in the door of the firing chamber, made about at two-thirds of the height of the door. This spyhole is roughly made

by four rectangular tiles (Fig. 36 and 37). It is closed with a stopper (Fig. 38) in fire brick, in the axis of which a hole has

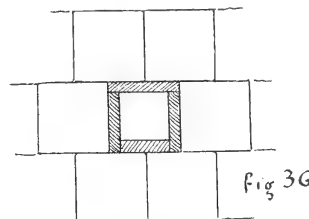


Fig. 36

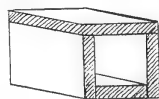


Fig. 37

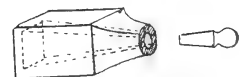
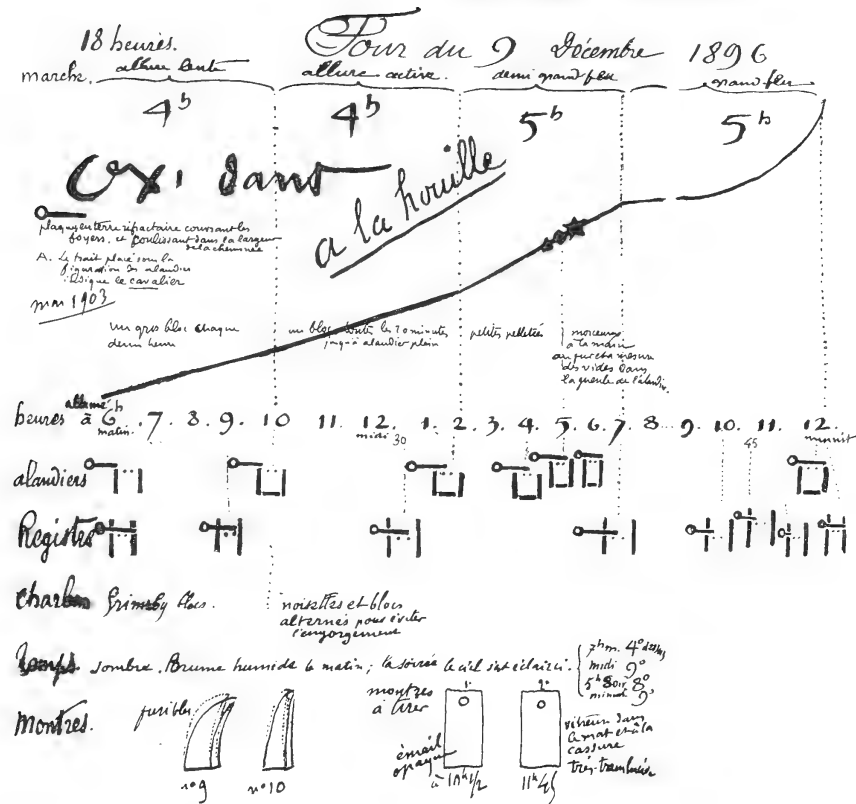


Fig. 38

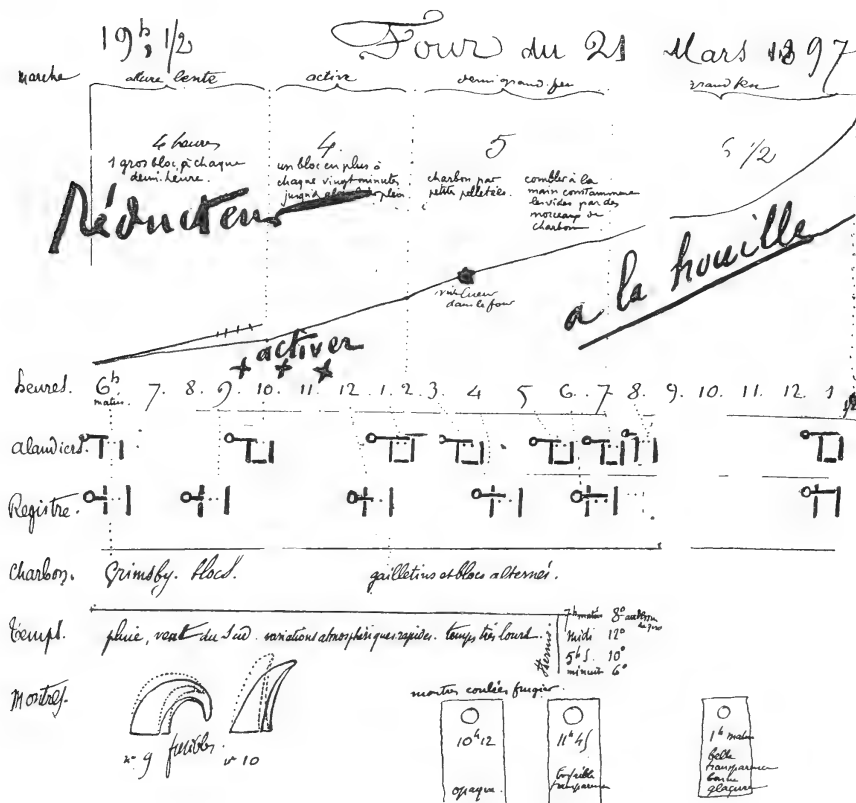
Fig. 45.



Alandier, fire mouth. Registre, chimney damper. Montres fusibles, Seger cones. Montres à tirer, trial pieces. Noisettes or galletins, nuts of coal. Houille, coal.

Both firing and baking good. Firing stopped at bending down of cone 9 for cast pieces. Spynole and cones placed in the middle of the kiln. The dotted lines on cones show the bending at the time the firing was stopped, the full lines the bending when the kiln was opened. (After firing is stopped, even in the absence of fuel, there is a rise of temperature for which allowance must be made.) This firing was oxidising in its results, reducing at first, oxidising at the end. During the reduction the fire mouths were wide open and had an excess of fuel, the chimney damper was closed. Toward two o'clock, when the time came for the firing to become oxidising the fire mouths were gradually closed and the damper gradually opened. (The dash with ring above the figure for fire mouth represents the plaque of fire brick which covers the fire mouth and slides in and out. The dash at bottom represents the stopper V [Fig. 31.]) At the opening of the kiln two biscuit pieces were found warped, and a piece which had not been sufficiently protected was found stuck to its support. At 10.30 P. M. the trial pieces showed the body to be opaque; at 11.45 P. M. they showed a good translucency and a thoroughly vitrified body. The star shows the time of the brightest light in the kiln. The weather was dark and foggy in the morning, cleared off in the evening.

Fig. 46.



Very good results. The upper half was biscuit, the lower half glazes. The spynole was placed lower than in the firing of Fig. 45, about one-third of height of the kiln. Cast pieces were placed above the cones and were good; turned and pressed pieces placed below the cones were very good; figurines placed at bottom were good. One piece broken, two others warped because they did not rest flat on their support. A biscuit piece with hollow base warped, the hollow should have been filled with sand to support it. The cones being placed lower than for firing fig. 45, the firing was stopped at good bending down of cone 9, which is equivalent to a slight bending when cones are in the center of the kiln. At 10.12 P. M. the trial pieces showed the glaze to be opaque; at 11.45 P. M. a feeble translucency; at 1.00 A. M. good translucency and fine glaze. The firing was reducing; fire mouths opened at first, closed at the time of the fusion of the glaze and gradually opened to give the greatest amount of heat by accumulation of fuel. Inversely the chimney damper was gradually closed with the progress of the firing. In oxidising, closed fire mouths, open damper; in reducing, open fire mouths, closed damper. On account of very heavy weather the grand feu period was very slow, draft poor; toward the end weather became better and draft more active.

been made which is itself closed with a round piece of glass or a small biscuit stopper.

The firing chamber is 4 feet high from the floor to the crown, and 32 inches in diameter, which makes it of easy access to the placer. It can contain three piles of saggars (Fig. 39 and 40) having $13\frac{1}{2}$ inches outside and $11\frac{1}{2}$ inches inside diameter. Twenty medium size pieces or fifty small ones in porcelain or grès can be fired in this kiln. Plaques 24 inches in diameter are easily placed in it, and three pieces 24 inches wide and 14 inches high can be fired one above the other.

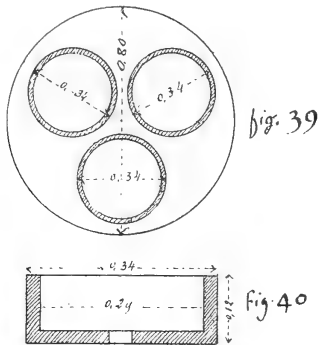


fig. 39

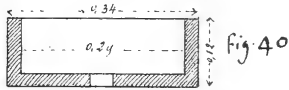


fig. 40

I used to burn from 500 to 600 lbs. of Grimsby (England) coal, at a cost of about \$10 a ton delivered. A firing then used to cost me about \$3 in fuel, and as I did all the work myself, the total expense of the firing was not over \$6, and the results in white, biscuit, bas reliefs Wedgwood style, etc. could be worth as much as \$600.

The Grimsby coal, free from slag and with its long flame, is an ideal coal, because of all European coals, it is the one which resembles wood the most closely. It is sold in blocks or in small nuts. The white ashes of the 600 lbs. burnt could be held in the hollow of my hand.

The construction of that kiln cost me about \$200 (1000 francs, being exactly fr. 438,60 for labor, fr. 444 for material and fr. 105 for iron braces.) The inside walls and the fire mouths in direct contact with the flame, were in fire bricks of the English brand Carr, the balance in fire bricks of the French brand J. The advantage of this combination was an economy, but it was offset by the lack of homogeneity in construction, the two bricks of different brands being of different size and thickness. If it were to be built over, it should be made entirely either of Carr bricks or of bricks of the French brand J B, which are sold by Mr. Boucher, rue Troyon, Sèvres (Seine et Oise). This hard brick is easily handled and behaves well in the firing. It is the brand adopted by Sèvres and by most porcelain manufacturers of France.

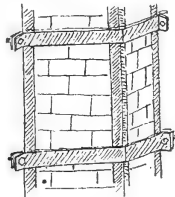


fig. 44

The iron braces P consisted of supports $1\frac{1}{2}$ inch wide and $\frac{3}{4}$ of an inch thick, and of bands $1\frac{1}{2}$ inch wide and $\frac{3}{8}$ of an inch thick. But I found this bracing rather weak and it should be strengthened.

The outside height of the kiln, from the floor to the crown was 9 feet 10 inches and the chimney measured from the crown of the kiln 19 feet 8 inches. This chimney was braced in the angles, at every three feet, with iron bands bolted together (Fig. 44). The damper S (Fig. 31) was about 12 inches from the lower part of the chimney.

The Grimsby coal was used both in blocks and nuts. During my first experiments I had tried Cardiff coal, but it crumbled to pieces in the fire mouth, thus choking it too easily. The Grimsby remains in block while burning, which allows a free circulation of air and an active draft.

A firing lasted about 18 hours with a gradual increase of heat and feeding of fuel. The *slow firing* during the first four hours was obtained by feeding every half hour a block of coal about 6 x 6 inches. Then came the *active firing* lasting four hours more, when a block of coal was fed every twenty minutes until the fire mouth was full. At that time I commenced the *demi grand feu*, lasting five hours, during which I used only nuts fed every fifteen minutes with a hand shovel. During the last five hours I made the *grand feu* firing, keeping the fire mouths full of nuts and blocks, fed alternately, so as to avoid choking.

The spyhole, placed at two thirds of the height of the door, made it possible to observe and follow the progress of the firing, by watching the Seger cones. I stopped at the bending down of cone 10.

To make these explanations more easily understood, I reproduce (Fig. 45 and 46) the records of two fine coal firings.

It will be noticed that the changes in the opening and closing of the fire mouths are just the opposite of changes in the chimney damper, when oxidising or reducing firings are needed. But I will treat this point fully in the article on firing.

The peculiar feature of this coal kiln is that it has no iron grate, the two little bricks BB' (Fig. 35) being used to hold the fuel. When the fire mouth gets choked, one may wait until the fuel is consumed or one may bring about the circulation of air with a poker, which is introduced in the fire mouth not through the top opening, but horizontally through the stopper V (Fig. 31). Anyway, if properly handled, the alternate feeding of nuts and blocks prevents choking, and the two bricks which are at the opening of the fire mouth into the firing chamber, prevent the fuel from falling into the kiln.

It is important while the firing lasts, not to go to sleep, and, should this happen, not to try to catch up by increasing the feeding of fuel. The results would be disastrous. A kiln is regulated like a lamp, which can be moderated or pushed at will.*

TO BE CONTINUED.

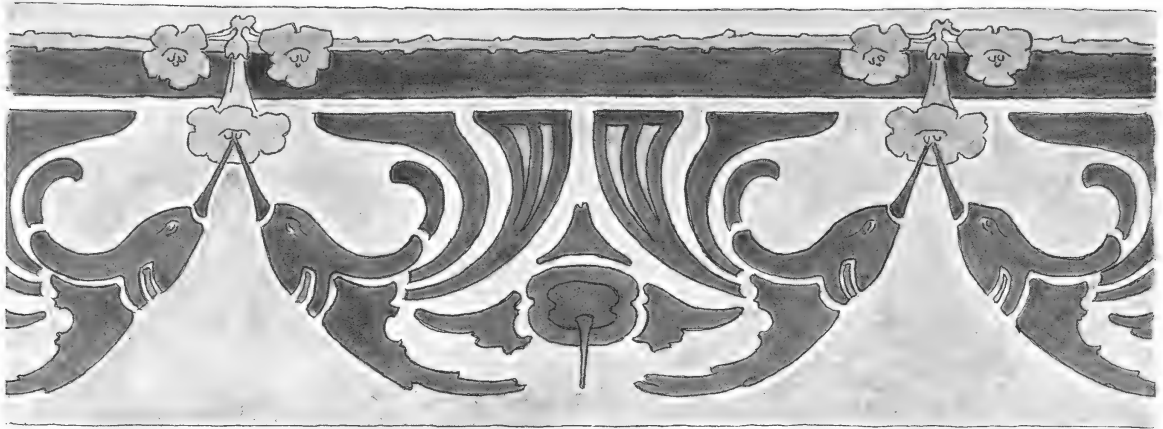


KAISER'S CERAMICS AT MACY'S

CERAMIC art as exhibited at Macy's great store has caused considerable interest in the products of the Royal Berlin Porcelain Works. The specimens are in the majority reproductions of the original vases and other articles in porcelain which have been presented by the Kaiser and Kaiserin to distinguished men in their military and diplomatic service, and friends of the royalty.

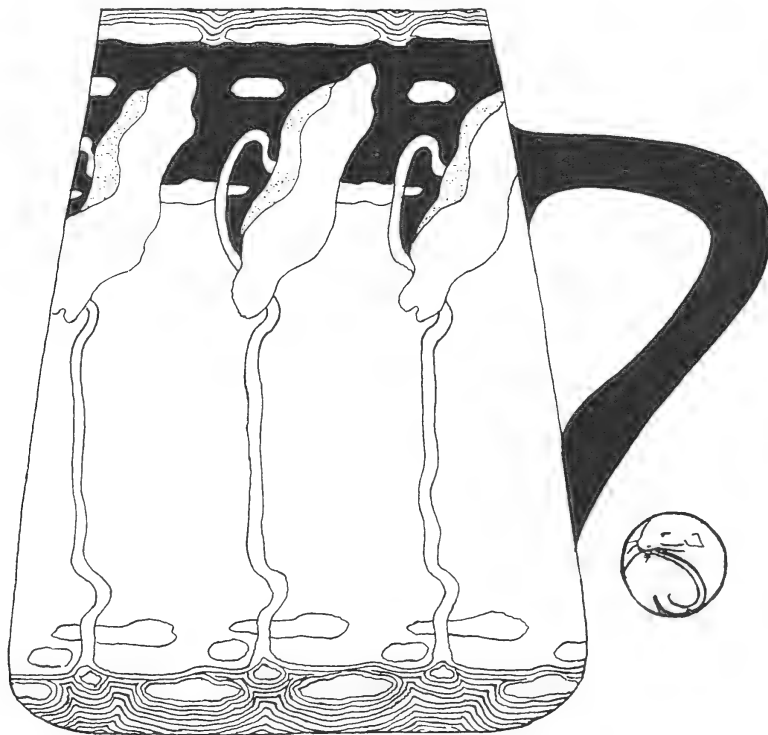
The porcelain factory in Berlin, was founded in 1750 by Wegely. In 1763 the establishment was bought by Frederick the Great, and later passed as an estate into the royal possession. To reach the pinnacle of perfection in Ceramic art the Kaiser has paid considerable attention and unlimited money.

*Lack of room and the number of illustrations prevent us from giving Mr. Doat's article in full. The second part, on kilns with fire mouths for wood, will appear in February issue.



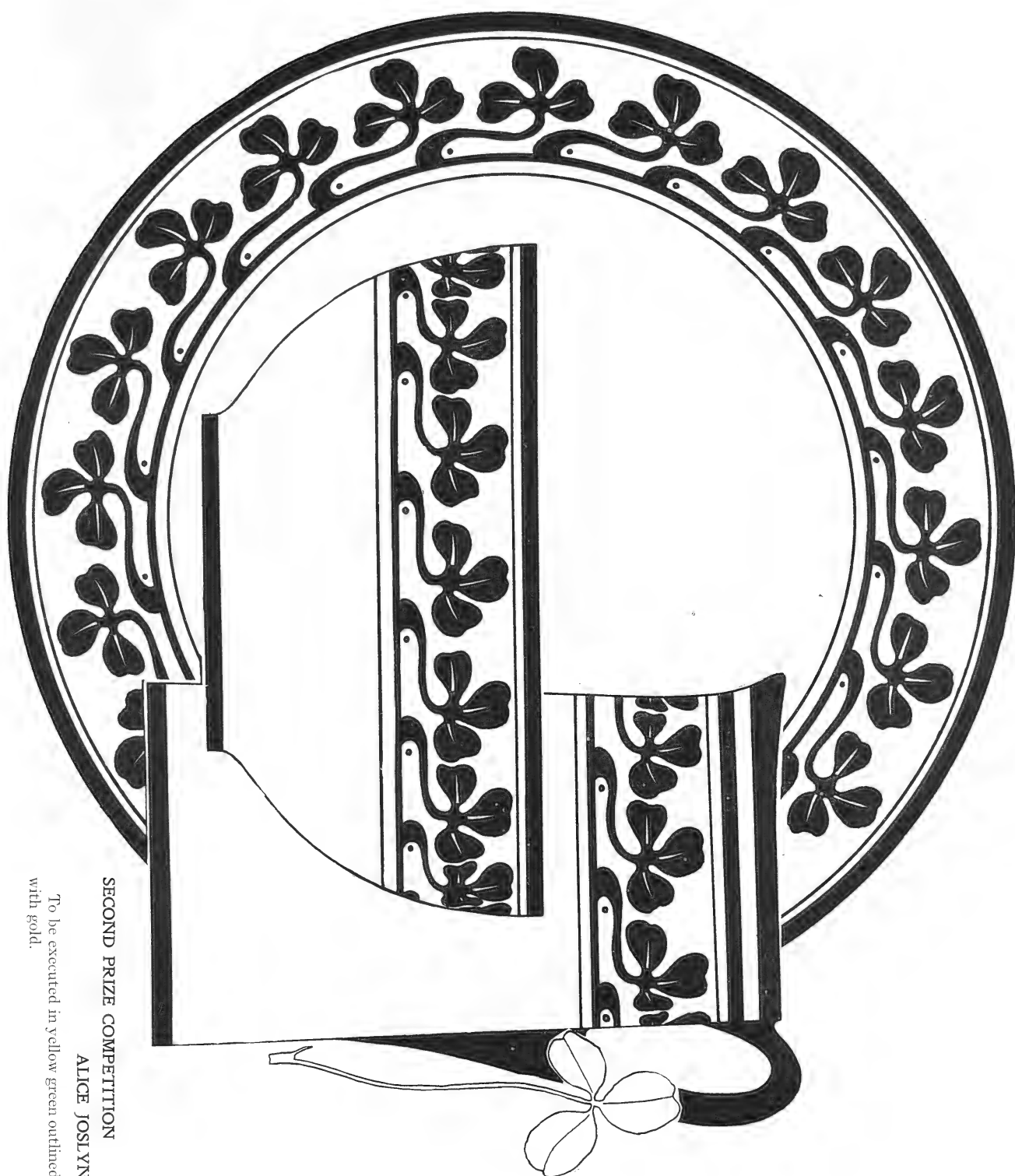
BORDER DESIGN FOR PUNCH BOWL—MARGARET OVERBECK

Ground, pearl grey, birds, grey green and grey blue, band greyish violet and flowers a pale pink with yellow in centers, stem grey green and upper rim pearl grey, outlines in gold.



LILY LEAF DESIGN—ALICE WITTE SLOAN

Black portion of background Dark Blue. Water lines under leaves and at base of mug may be traced in Dark Blue or laid in solid in a lighter shade of Blue. Stems and leaves Green outlined in Dark Blue. Dotted portions Red. White spots and rim bands, Gold.



SECOND PRIZE COMPETITION

ALICE JOSLYN

To be executed in yellow green outlined
with gold.

TREATMENT FOR WILD CARROT PANEL

M. M. Mason

AFTER a careful sketch of the flower forms, begin the painting by laying in the background with Royal Blue, Blue Green and perhaps a little Black, shading this into Copenhagen Gray, then to Ivory around the principal flowers. Continue the background with Gray Green, Shading Green, Dark Green and Black Green, introducing the blue of the upper background into the distant flowers.

While the background is still open paint in the flowers with Gray Green and Copenhagen Gray and with the background color which surrounds them.

When quite dry dust with the same colors used in the painting, carrying the Copenhagen Gray softly over some of the lower toned flowers, allowing them to fade into the background when in shadow and wiping out a few crisp lights in their brightest parts.

About the same palette is used in retouching with the addition of Albert Yellow and Russian Green in the background. The Violet in the background is slightly exaggerated and it would be better to keep it grayer.



TREATMENT FOR STRIPED BASS

Sara N. Warren

DRAW the fish carefully, and if the design is used for a vase, move the two small fishes more to the right and spread the sea weeds around the back of the vase. Wash the fish over with a tint of Carnation very softly shaded into the white china, leaving the belly white. Draw a grey line to define the form, and let the blue or grey water in the background accent the fish and make a strong contrast.

The back of the fish is quite a dark brown green, the body being a soft grey with stripes of Brown Green. Stipple the green, grey, and tint together, then paint in the dark green stripes. The head is yellow and brown green, the eyes yellow brown with dark brown pupils, and hair brown markings about them. The fins are pink used delicately, shaded with Brown Pink (or Violet of Iron) near the backs, light near the body. Inside the mouth Pink; gills, Light Yellow Brown. Seaweeds, Grey shaded into the background at the back of the fish, Carnation and Violet of Iron in the front groups with green ones back of the pink seaweeds. The background Pale Blue at top, Apple Green and Grey, lines across the fish wiped out.

Starfish Yellow; mussel shell, Black and Dark Blue; light inside.

For second firing use the same colors, using a wash of Shading Green over the large fish on the back. Keep the smallest fish very grey.



CLUB NOTE

THE Springfield Ceramic Club held its annual exhibit the first week in December. There was a general improvement in designs, the club having studied this year with Mr. Daniels, Art Instructor in the public schools. The exhibit of Miss Elizabeth Day and Miss Marianna Heath were perhaps the most remarkable though several others had attractive exhibits.



WILD CARROT PANEL—M. M. MASON



STRIPED BASS—SARA N. WARREN

CLAY IN THE STUDIO

(Twelfth Paper.)

Charles F. Binns

NO doubt anxious and progressive artist potters have been looking forward to instructions for preparing the coveted "matt" glazes and the time seems now to have arrived when these may be given. A word of caution must, however, be spoken at the outset, for those who have successfully produced bright glazes must not expect the same easy victory over the matt. Let not this be understood to mean that bright glazes are necessarily easy. A simple bright glaze, of a sort, presents no difficulty, but in order to produce really fine and brilliant glazes, free from the long catalogue of defects spoken of in the last paper, much knowledge and perseverance are necessary. No glaze making can, as a matter of fact, be perfect without assiduous application and considerable scientific knowledge. As stated two months ago that knowledge will not be presumed in these instructions. It is thought best to place the matter on such a footing that even the beginner can hope for success, but it must be repeated that failure to reach one's ideal must not discourage, there are very few even among experienced and scientific workers who realize all they want.

Matt glazes are so constructed that the surface, on burning, assumes a tender, silky texture, not dead like biscuit ware, nor scummy like half-burned glaze, but of a quality like the shell of a duck egg. This texture is a matter of the chemical constitution of the glaze but it is largely influenced by many secondary considerations. Matt glazes as compared with bright are harder to prepare, harder to apply and harder to burn.

Presuming the heat of the kiln to be cone 1, or a little more, a matt glaze can be made from the following mixture:

White lead	35
Whiting	10
Feldspar	37
Zinc oxide	3
Kaolin	13
Flint	2

100

The materials are to be weighed out and blended as described for bright glazes and the ware may be prepared for dipping. To secure the best results matt glazes must be laid on in a very thick coat but if enough glaze cannot be got to adhere the first time the piece should be burned and re-dipped. An attempt to add a second coat when the first is only dried will surely end in disaster. The glaze must be used very thick, so thick that it will only flow sluggishly from the hands. It is an advantage to mix some mucilage with the glaze, starch paste or dextrine or gum will answer, the object being two fold (1) to secure an even flow and (2) to enable one to handle the piece when dry.

The pottery to be dipped must be rendered non-absorbent by soaking and be thoroughly dried off. The inside of the piece is first filled and well shaken out and then the attention can be devoted to the outer surface. Everything should be placed in readiness for drying the ware for no touch can be allowed after dipping until quite dry. A thick coating is poured on with the hand and the piece shaken lightly with a circular motion so as to distribute the glaze evenly without losing much.

The beginner's mind must be made up to endure disappointments. Time and time again it will be found that the dipping has been unsuccessful. The glaze is streaky or lumpy or has gathered more thickly here than there. Fortunately, however, these troubles can usually be detected before burning. If so it is better and cheaper to wash the glaze off and begin again. The material need not be lost. If washed into a clean basin it will settle down and can be collected and returned to the batch. It must be remembered that the fire has but little power over matt glazes and the glazes themselves little mobility. In bright glazes a scratch or a patch is of small importance, the glaze will flow and heal the defects. Not so in the matt. As this goes to the kiln so it will come forth. Every finger mark, every inequality will remain and will show up in all its crudity, many more, in fact, than were suspected. The burning of the glaze will surely reveal errors which were before unseen. The remedy is practice, practice and yet again practice!

Grudge not the glaze material. Wash off and redip again and again if necessary, not resting satisfied until a smooth even coating can be secured and the fingers removed without leaving a mark.

One of the chief troubles arising in the glaze is that it is prone to crack in drying. The thicker the body of glaze the worse this is apt to be. There are several remedies, sometimes one will suffice, sometimes more than one must be tried. An increase of mucilage will prove helpful but renders the glaze bad to keep. In fact in all mixtures with mucilage it is best to add a few drops of carbolic acid or some other germicide. This will keep the glaze sweet. Another remedy is to burn the kaolin before adding it to the glaze. This is not easy in the absence of a mill, for the particles of clay become hard on burning and need to be ground. The trouble may, however, be overcome by reducing the kaolin to a very fine powder before burning it. If this is done and the substance sifted through a fine sieve it can be carefully placed in a biscuit cup or crucible without being packed down and it will retain its fine grain in the burning. It can then be easily crushed in a mortar by hand. If the glaze is inclined to dust off on the fingers it may be well to use ball-clay instead of kaolin. This clay has greater binding power and will help to hold the glaze together. Still another expedient is the addition of a little soluble salt, washing soda or saltpeter, to the glaze. A pinch is enough, it will not hurt the glaze but will aid in binding it.

The faults arising in matt glazes are somewhat different from those found in bright glazes. Crazeing does not seriously trouble because it is scarcely visible when it occurs and, the pieces being mostly ornamental in character, does not amount to a hygienic defect. Shivering, on the other hand, is common upon some clays. The body given in these papers does not shiver with these glazes but many natural clays will do so. If the glaze be laid thickly on a thick piece of ware the fault shows in the pulling out of pieces from the edge or along any embossed portion. On thin ware the result is the fracture, often with almost explosive force, of the entire piece. No remedy is possible except to change the clay.

It is sometimes found that the surface of a matt glaze will be filled with small holes, even approaching to a spongy appearance. This is due either to a lack of heat in the kiln or to the fire not being kept clear. Any approach to a "reducing" flame will cause this phenomena and the remedy is, of course, to be sure that the fire be completely oxydising.

The composition of a matt glaze has a great influence, not only upon the point of fire at which the glaze assumes its perfect texture, commonly called the point of maturity, but upon



WILD CARROTS—MAUD M. MASON

JANUARY, 1904
SUPPLEMENT TO
KERAMIC STUDIO

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SYRACUSE, N. Y.

the action of the chromogens or coloring agents used. The glaze given above is quite suitable for making a certain class of greens but will not work for every color. Another glaze for the same heat but different color effect is as follows:

White lead	50
Feldspar	32
Barium carbonate	12
Kaolin	5
Flint	1

100

The Barium carbonate used should be the "precipitated" form. There is a natural mineral named "Witherite" which is very pure but is hard to grind sufficiently fine for glaze work.

With these two glazes considerable work can be done, in fact, at the temperature given no other white glaze will be necessary and the coloring agents can be added to either glaze according to the effect desired. The white glaze should, however, be tried and proved before taking time and trouble with colors.

This remark will, probably, call forth some exclamation of surprise for it will naturally be expected that in these papers only those mixtures which have already been tried and proved will be advocated. Let it be understood therefore that these mixtures in the kilns and under the treatment given at Alfred have been found perfectly satisfactory, but this is by no means equivalent to saying that they will be equally satisfactory elsewhere. No two manipulators work in just the same manner, no two kilns fire just alike and for these reasons it is not possible to put forth an infallible recipe. All that can be said is "I have done good work with this." Let no one be discouraged, therefore, if immediate results are not obtained. The art of the

potter is the most troublesome as well as the most fascinating of all the arts and for that reason, perhaps, the best worth mastering.

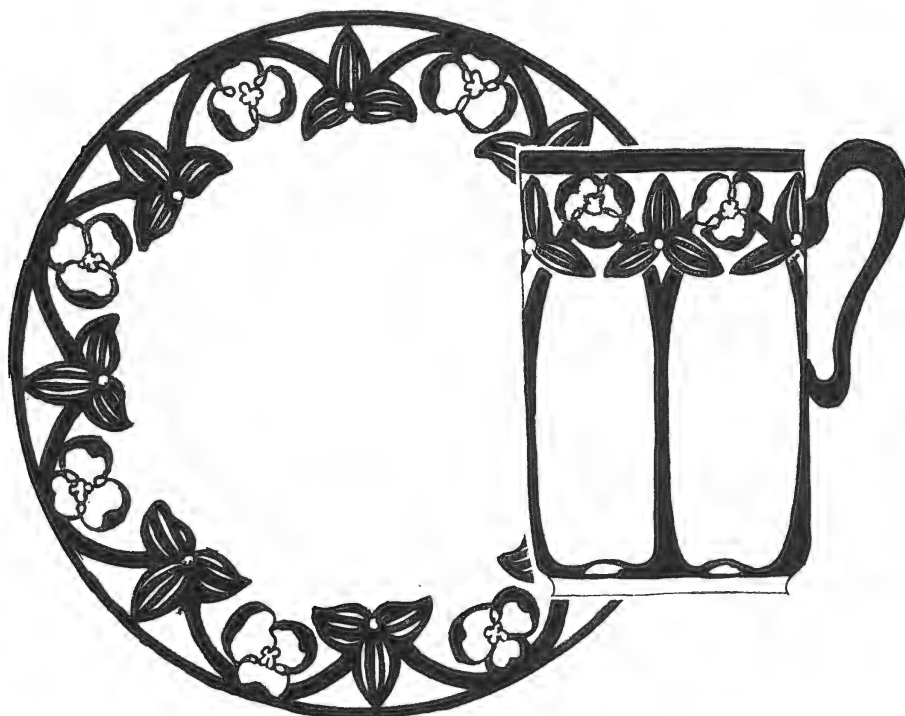
If a given mixture does not behave just as it is expected to, the door is open for a few experiments. One or another of the materials may be increased or decreased in the mixture, taking care to make accurate notes and to observe closely. The fire may be changed, made longer, or shorter, more air to the fuel or a less abundant supply of fuel. There are many ways in which a patient and intelligent worker can influence the results.

Then having secured a white glaze which will meet all requirements a goodly batch of the same should be mixed and ground. Not more than can be manipulated at one time should be weighed, but two or three such weighings can be prepared and then mixed together. When dried and carefully put away in jars, this stock (without mucilage) will keep for ever and can be drawn upon as needed.

In most cases the color can be added to those glazes, but in a few instances it is best to grind glaze and color together.

For a simple green add to glaze No. 1 three parts black oxide of copper. The method of adding this colorant is important and this is how it is done:

A glass slab and muller are almost indispensable here. The small one used for grinding colors will serve at a pinch but is usually too small for glaze work. If possible a sheet of plate glass about 20 or 22 inches square should be procured and this should be set in a wooden frame which lies flush with the glass, that is there is no raised edge. A muller weighing some two pounds or more is about the right size and with a little practice good work can be done with it. To make the



DESIGN TO BE EXECUTED IN BLUE OR GREEN—KATHERINE SINCLAIR

green then three grams of copper oxide are weighed out and transferred to the glass slab. A few drops of water are added and the oxide ground to a fine paste with the muller. Now for the glaze. Ninety-seven grams of glaze weighed out will complete the hundred but this should not all be added to the copper at once. Little by little, with the addition of enough water to allow free motion, the glaze is placed on the glass, each portion being incorporated with the previous one until the whole is a light gray fluid mass. If one has to work by hand it is only by such precautions as these that a perfect

mixture can be secured. On a large scale the mill does the work.



General Palmer of Colorado Springs and Mrs. Bellamy Storer, the founder of the Rookwood Pottery, have formed a plan to utilize the clays, minerals and gems of the State of Colorado and to make Colorado Springs a manufacturing center for arts and crafts of an Oriental type.



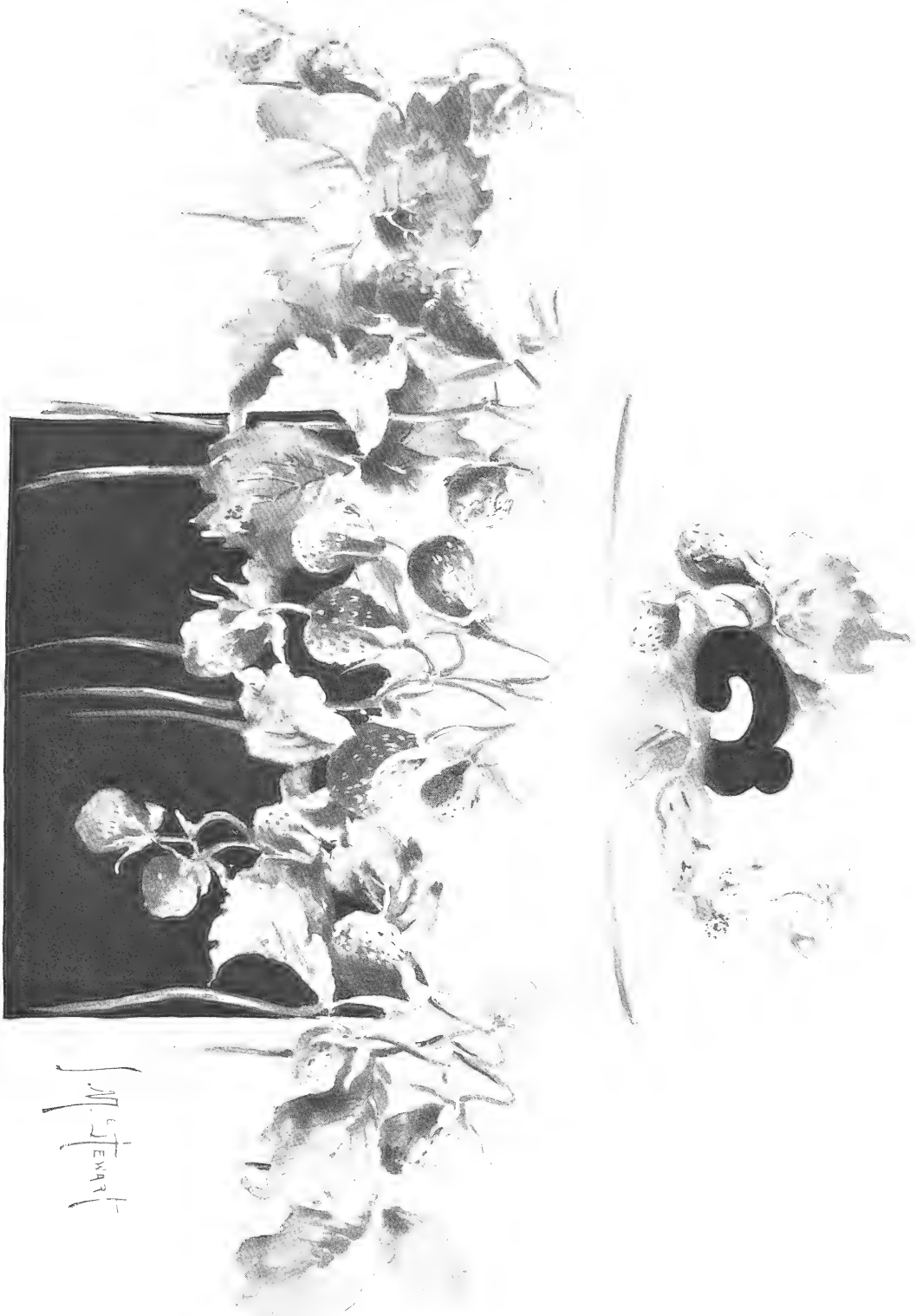
WILD STRAWBERRY DESIGN FOR JELLY JAR PLATE—JEANNE M. STEWART

DRESDEN Yellow Red and Pompadour 23, may be mixed, equal parts, for the brightest tones in these little berries, and the Pompadour alone for the dark. Many of the berries, especially the smaller ones, may be painted in the greens and yellows, representing unripe fruit. The seeds should not be made too prominent and a little high light taken out above the seed will tend to make the berries appear more luscious.

Yellow, Turquoise, Olive, Brown and Shading Greens are used in the leaves.

Lay in background in the second fire, using Ivory Yellow above the berries and leaves in a smooth tint, and Shading and Brown Green, equal parts, below.

An extra fire will improve the dark green tint and the powder color may be dusted on in the last fire.



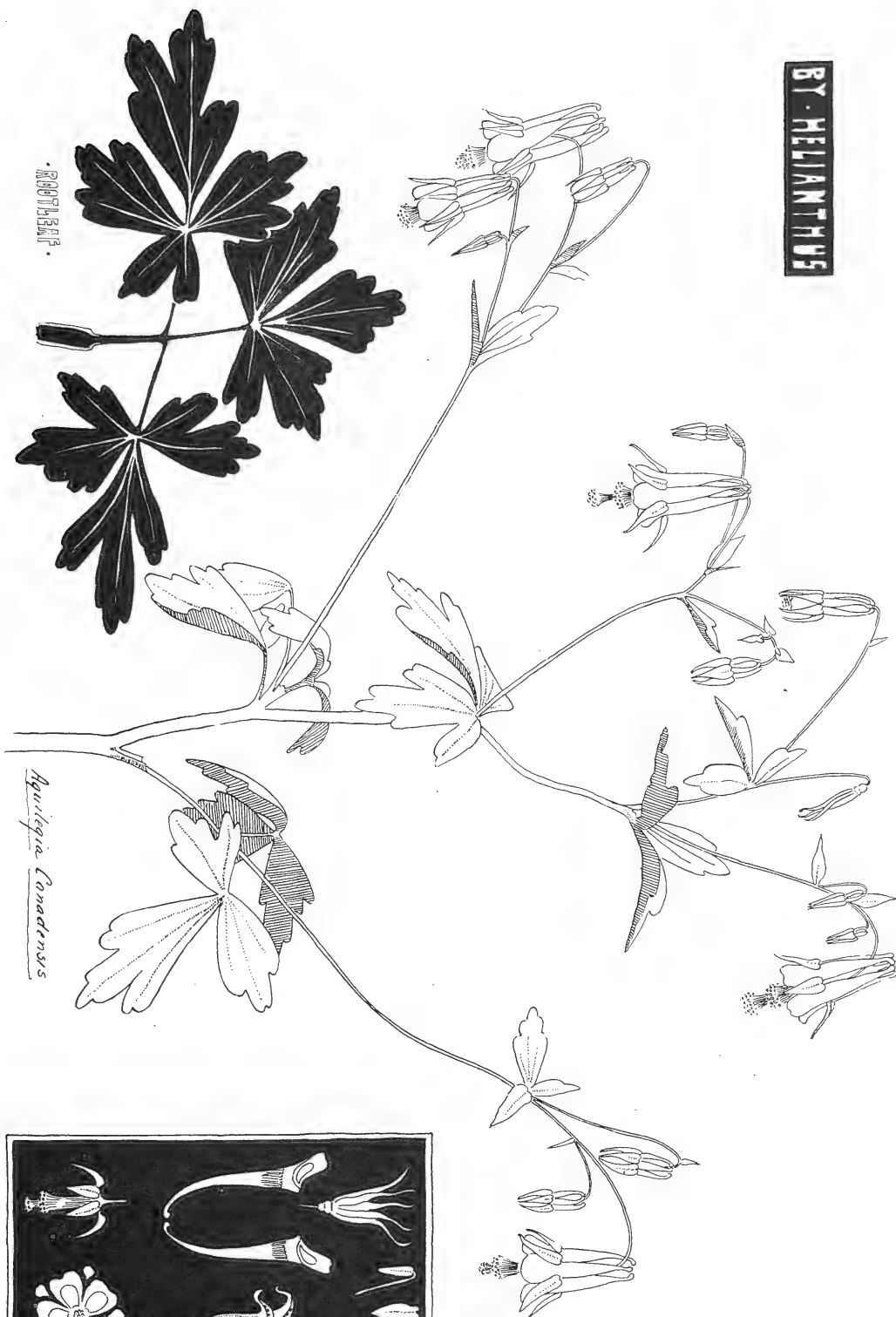
WILD STRAWBERRY DESIGN FOR JELLY JAR—JEANNE M. STEWART



DESIGN FOR PLATE—MARGARET OVERBECK

To be executed in gold and red and yellow brown with black or red outlines.

BY HELIANTHUS

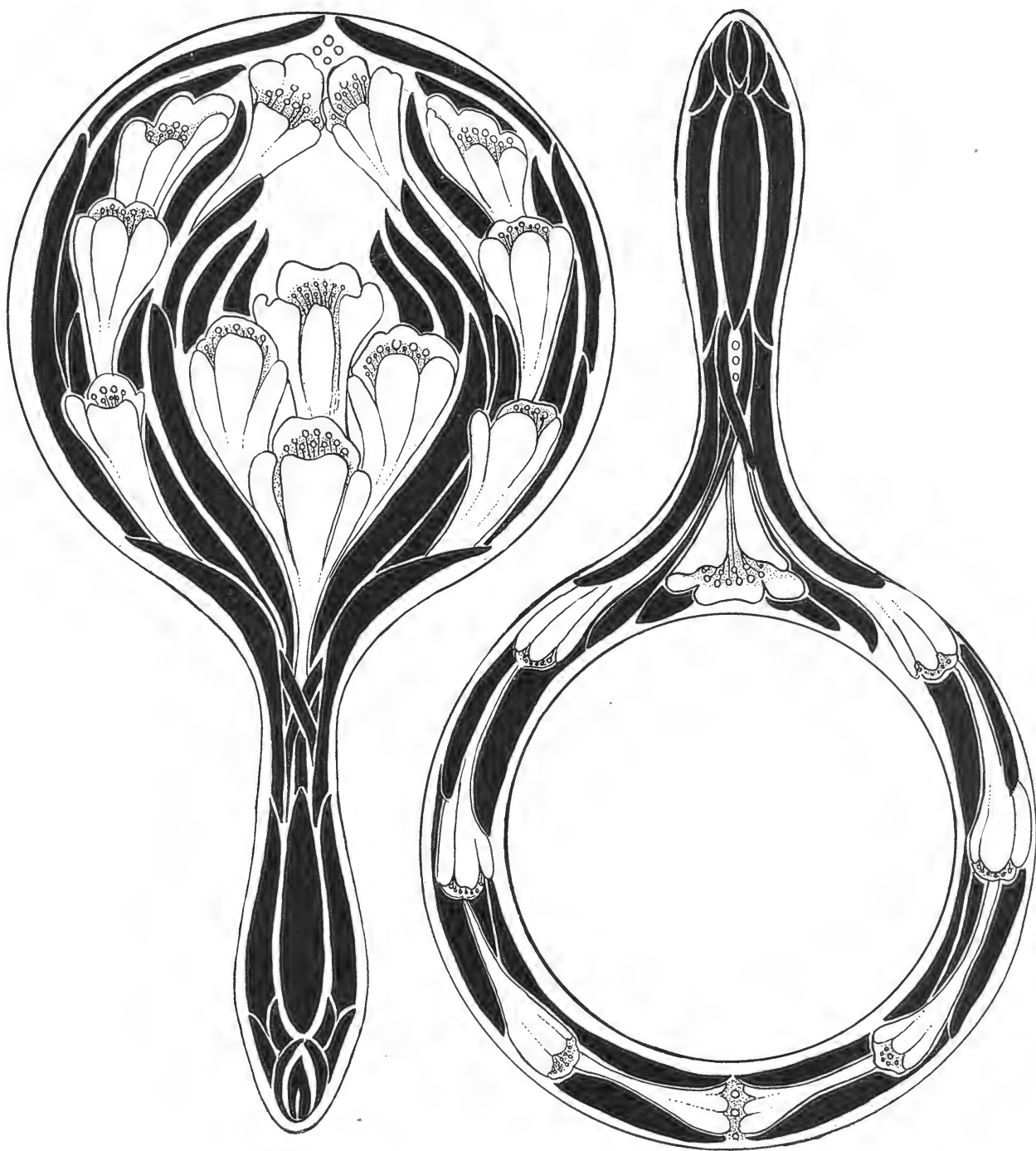


ROOT LEAF

Aquilegia Canadensis

COLUMBINE—EDITH ALMA ROSS

Flowers bright scarlet with yellow rims to cornucopias, leaves green.



DESIGN FOR HAND MIRROR—LUCIA A. SOULE

Flowers ivory or yellow lustre on yellow brown lustre ground, leaves gold outlined with Meissen Brown or leaves Meissen Brown, outlines and Stamens Gold.

THE CRAFTS

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HOW CHASING TOOLS ARE MADE

Edith Vail

THE making of steel tools is not a difficult process if each step is accurately and carefully done. Chasing tools for metal work are made from square bars of annealed tool steel of varying dimensions, from $\frac{3}{8}$, $\frac{1}{4}$, $\frac{3}{16}$ down to $\frac{1}{8}$ of an inch in width according to the purpose of the tool.

We begin by placing the long steel bar on an anvil and with a chisel and hammer cut off pieces the required length for each tool, which is about $4\frac{1}{2}$ inches. If annealed steel cannot be obtained, ordinary bar steel may be used as it is a simple matter to anneal it, since annealing, or softening of metals, consists in heating the metal red hot and allowing it to cool slowly.

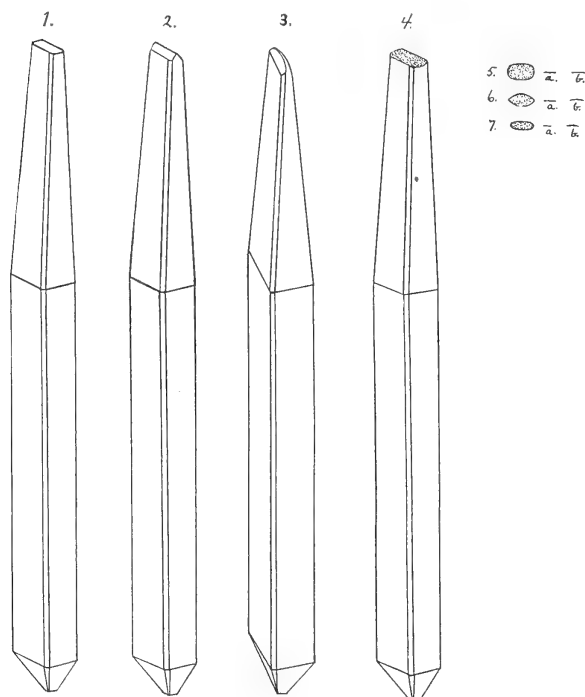
Now place one of the pieces lengthwise in a large vice with about two inches of the bar slanting upward so that it will just

slanted to such a degree, only about $\frac{3}{4}$ of an inch being taken off from the end of the tool. Turn the tool in the vice to the opposite end and file this cone-shaped, leaving a small flat surface on top for the hammer to strike upon. Bevel off the four edges of the tool the entire length. We now have a blank in the rough. With a medium sized flat cross-cut file, which will be about 8 inches long and $\frac{5}{8}$ wide, file over the entire filed surface to remove the deep scratches made by the large file, but do not change the shape of the tool. Repeat the same process with a very fine flat cross-cut file to remove the scratches left by the medium sized file, and with this file slightly round off the four bevels from the face of the special shaped end of the tool back about half an inch. Now proceed to finish off the special end only, by rubbing the entire surface of the four slanted sides on coarse, medium and fine emery paper until a polished surface is obtained and no scratches are visible. This process is made easier by placing the tool in a hand-vice rather than holding it in the hand. We now have a finished blank (Fig. 1).

The first tool necessary for chasing is a straight tracer (Fig. 2) used on all straight lines in outlining a design on metal. This tool is made by taking a finished blank and with the finest file bevel the long edges of the face of the tool about $\frac{1}{2}$ of an inch wide and so that the two bevels *almost* meet at the center as in Fig. 2. Polish off the bevel with fine emery cloth, also slightly round off the edge where the two bevels meet, it is also well to slightly rub over the ends so there will be no crude edges or corners to catch in the metal.

The tool is now ready to be hardened. This is done by heating about an inch of the special shaped end of the tool, not simply red hot but to an orange red and plunging it instantly into a vessel of cold water. The tool must be plunged vertically into the water, hot end first and at same time rotated in a circular manner. If plunged slantingly into the water the tool will cool more rapidly on the side which touches the water first and hence will very probably be bent out of shape. If heated beyond an orange red to a yellowish color the tool will be burned, making it too brittle and marked with small spots. If not heated enough the tool will not become hard. Remove the tool from the water and with a piece of fine emery paper rub off the blackness produced by heating. The proper hardness of the metal may be tested by passing the edge of a file across the tool near the end. If it leaves no scratches the tool is hard, but if scratches are easily made the tool should be hardened again.

The last process is to temper the tool. After the hardening process the tool is left very hard and somewhat brittle and with hard usage liable to crack. By tempering the tool the steel is rendered more or less elastic without losing its hard qualities. Tempering is done by holding the middle of the tool in a Bunsen flame, watching carefully until a steel blue color appears on the tool near the flame; simultaneously next to the blue appears a rich brown color which fades out to a faint straw color. The three colors will be seen to gradually creep toward the end of the tool and the instant the faintest straw color reaches the end it must be plunged into cold water to stop the process. If the brown color is allowed to reach the end of the tool, the tool is more than likely to be too soft to use. If the blue color reaches the end we know it is too soft. Test the hardness with the file as before.



escape being even with the jaws of the vice, that in the process of filing the file will not be injured on the hard steel of the vice. To avoid undue noise in filing, the piece of steel must be kept as close as possible to the jaws of the vice and not allowed to project beyond the ends of the vice.

We wish to shape the bar down as nearly as possible like Fig. 1 which is called a blank. A blank is the general shape of all chasing tools, before the special shaped end of the tool to be used on the metal is made. With a large flat cross-cut file about 14 inches long by $1\frac{1}{2}$ inches wide, proceed to file an even slant from about $1\frac{1}{2}$ inches from the end of the tool to the middle of that end. Turn the tool in the vice to the opposite side and repeat the same, being careful to leave the end about $\frac{3}{8}$ of an inch in thickness which allows for the forming of the special face to be made on the end of the tool. The other two sides are filed in a similar manner except that they are not

The next tool to be made is the curved tracer (Fig. 3), used for the same purpose as the straight tracer only on curved lines. To make this tool take a finished blank exactly like the one used for the straight tracer. Instead of having the face of this tool flat as in Fig. 1, curve it slightly by filing lengthwise across the face. Bevel off one of the long edges of the face of the tool, allowing the bevel to nearly reach the center. On the opposite side (not face) of the tool from this, file the flat side so that it curves around and meets the flat side (with the straight bevel across the face). Now across the long edge of the face, on the curved side of the tool, file a bevel similar to the bevel on the straight side, only curve it around the ends of the face until it almost meets the ends of the straight bevel. Finish, harden and temper with the same process as before.

Fig. 4 is called a planishing tool and is made in the same manner as the above tools, the finishing and shape of the face of the tool being the only exceptions. The face is made the size of the illustration and left flat and matted, which is done after the tool is polished, by striking the face with the medium sized file and at the same time rotating it in the hand to avoid striking twice in the same place. This process is repeated until an even rough texture is obtained. The rough surface is to keep the tool from slipping on the metal. The tool is now ready to be hardened and tempered. The tool is used for setting down the metal on the back side which produces the raised parts of the design on the right side.

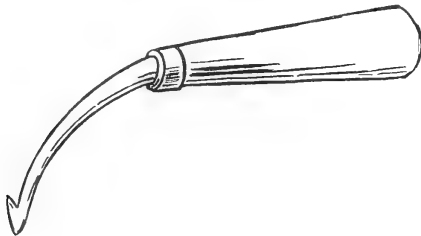
Tools of this character are made in hundreds of shapes and sizes according to the requirements of each design—a few are shown in Figs. 5, 6, 7.

All chasing tools are made according to the above directions; if they are carefully followed one should have no difficulty in making any shaped tool required.

A MODERN HAND MADE RUG

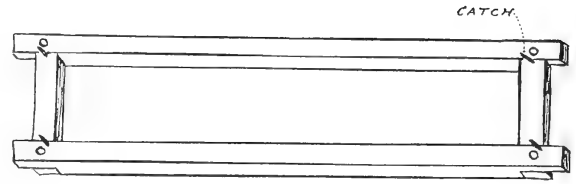
Amy Mali Hicks

IT is an interesting feature of the present Arts and Crafts movement, that sundry industries, which flourished in the days of our grandmothers, are being revived through its influence, and adapted to the conditions of modern craftsmanship. Among them none has lent itself more successfully to the rejuvenating process than the "hooked rug". In its present guise it quite justifies the popularity it enjoys, and can in appearance and bearing quality well compete with other modern rugs.

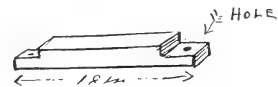
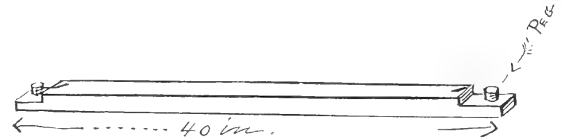


No. 1—THE RUG HOOK.

Yet it is made by a process so simple that it can be easily mastered by even an unskilled workman. As the name implies, the principal implement is the hook (shown in illustration No. 1). This can be readily made by any blacksmith or tool-maker from a twopenny steel nail, and afterwards set in a tool handle. The only other implement used is the frame (shown in illus. No. 2) with its several parts in illus. No. 3. It is made of



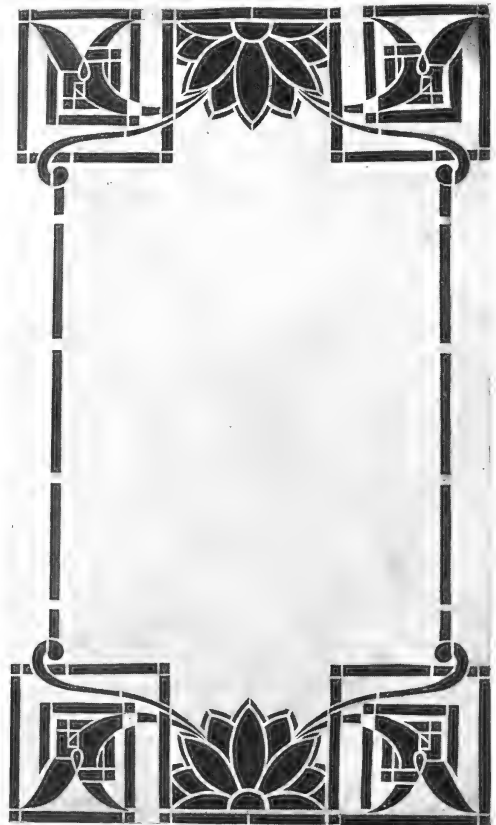
No. 2—THE FRAME



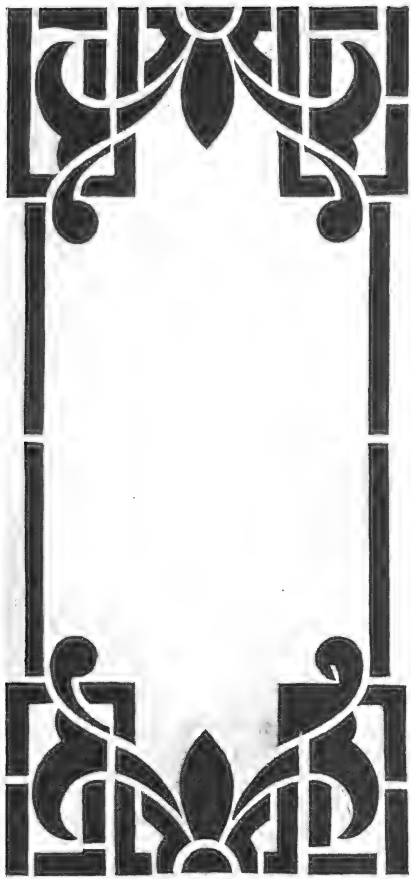
No. 3—PARTS OF THE FRAME.

four strips of pine about two inches in thickness, the longer or side pieces being forty inches, the shorter or end pieces eighteen inches. These are fitted together so that the pegs in the ends of the longer pieces fall in the holes in the ends of the shorter pieces. For greater steadiness are added little iron catches, which turning on screws hold the pieces snugly in their places.

Almost as simple as the tools, are the materials used in



No. 4—THE TEA CHEST PATTERN. Designed by AMY MALI HICKS.



No. 5—FRET AND SCROLL PATTERN. Designed by AMY MALI HICKS.

making the hooked rug. Though old cloth may be employed with good effect, the base of supplies is no longer centered in the rag-bag filled with the cast off garments of the family. For the best results and in order to secure uniformity of texture in the finished product, the material to use is a fairly good quality of unbleached flannel, which sells at wholesale for about twenty-five cents a yard, coming in pieces of sixty yards or so. The other material needed is what is known commercially as "raw jute," or burlaps, and which forms the foundation for the rug, while from the flannel the loops are made which cover its surface.

The preferred way to prepare the flannel for use, is to dye it oneself, matching as nearly as possible a color scheme which has first been worked out on paper. Artificial dye products from coal tar or anthracite may be used for this purpose and by being judiciously handled may have their original crudeness modified. The ideal way, of course, is to use only natural dye products, to make one's dye oneself, and then have the satisfaction of knowing exactly their origin, and that they are made of reliable chemicals and dye stuffs.

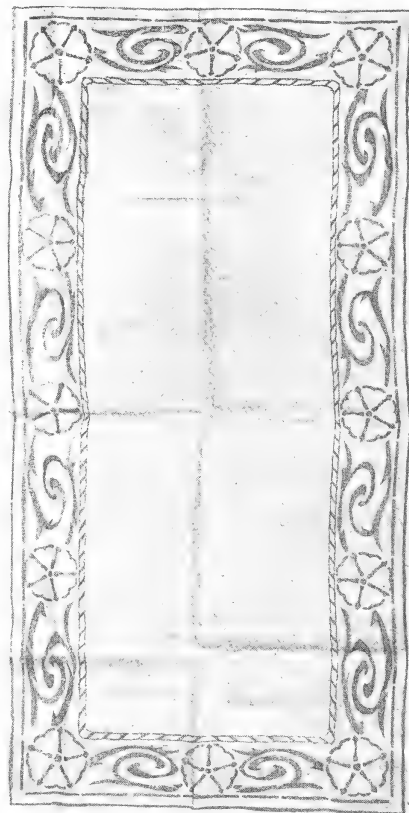
This latter method, however, involves a knowledge of chemistry, much skill and patience, and as all legitimate wool dyeing is based on the indigo fermentation vat, also much more time, experience and space than is at the disposal of the average rug worker.

Of course it is possible to make use of old materials, which are already colored, and which having undergone the softening

process of age and wear, possess unusually attractive tones. These same tones however are almost impossible to match, and I have hardly ever seen an instance where one started with something already on hand, that it did not give out before the rug was finished. Then as a final and last resource, one begins an indefinite and harassing "matching off" of color, which is never quite satisfactory in the end. The really practical way is to be sure to dye enough of the color needed, and if there is any left over it can easily be dyed a darker shade, or perhaps black, of which one always needs a supply on hand for outlining the rug pattern.

As to the pattern itself, it should be simple and structural in character, for the thread or strip of flannel from which the rug is worked, is too coarse to admit of much detail in treatment. Large masses of color of comparatively the same tone value are most effective. These color masses are immensely improved, and much beauty added to the tone of the rug if the flannel is not too evenly dyed, as the little irregularities in the color, create a certain variety in the tone which helps the general effect.

The design should be drawn the full size of the rug on stencil paper, then the stencil, (illus. Nos. 4 and 5) which is used for stamping the pattern on the burlaps or rug foundation, is cut and shellaced. After it is thoroughly dry it is pinned in the burlaps which is cut about three inches larger than the design on all four sides. Then take ordinary bottle blueing or liquid indigo, and brush over the holes of the stencil so that the design falls over the burlaps underneath. The printed pattern (shown in illus. No. 6) is then stretched upon the rug



No. 6—HEARTH RUG WITH PERSIAN ROSE MOTIF BORDER. Designed by AMY MALI HICKS.

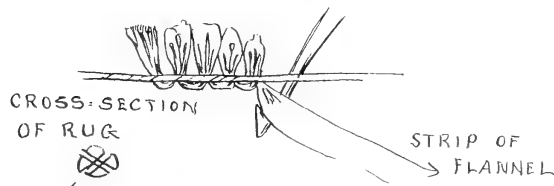
frame in the following manner: Take the frame apart and tack the ends of the burlaps pattern to the longer pieces of the frame, then roll the pattern around one of the bars until just the size of the frame, then put the frame together as shown in illus. No. 7. The burlaps should be stretched as tightly as possible.



No. 7—FRAME WITH RUG PATTERN MOUNTED.

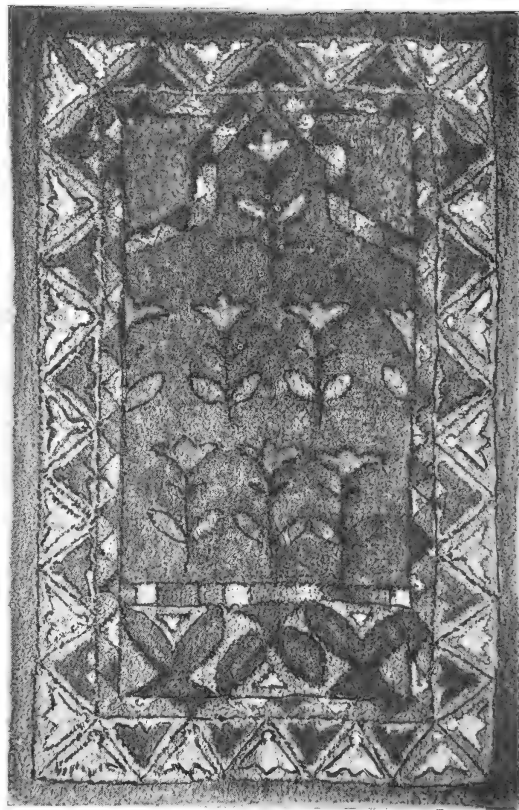
The rug is now ready for "hooking." The flannel has already been prepared by tearing it into yard lengths, folding into four thicknesses and cutting it into strips lengthwise of the selvage and one-quarter of an inch wide. Hold the strip of flannel underneath the rug pattern with the left hand, take the rug hook in the right hand and push the hook through the burlaps as shown in illus. No. 8. Catching the strip on the other side draw it through, making loop after loop on the upper surface of the rug foundation. Always begin by outlining the design as it gives one a clearer idea of the pattern, and draw up the outline somewhat higher than the level of the other loops and somewhat more evenly. The general height of the loops should average about one fourth of an inch, and in order to secure an interesting texture, it is wise to make about one in three somewhat lower. Leave from two to three meshes of the burlaps between the holes made by the hook, in order that the loops may not be too near together.

When filling in the frameful, be sure to work from the outside toward the center, as otherwise the edges of the rug are apt to be stretched. After the frameful is filled, it is ready to clip, which should be done before the rug is turned. In clipping the rug put the left hand underneath and raise the surface slightly, clipping with large shears the raised surface. It is not necessary to clip each individual loop, just about one in three makes the rug stronger and more durable. The sur-



No. 8

face of the rug can be made uniform after it is taken out of the frame altogether by going over it and evening up any little irregularities in texture. There can be no question that the finished rug is a durable and serviceable article and a perfectly professional looking piece of craftsmanship. Indeed it seems a far cry from the rug which gave the inspiration, to the finished one shown here. The former came from Prince Edwards Island, Canada, and was indeed a curious product. Though seemingly full of hopeless crudities it embodied a simple technique and has shown itself susceptible to aesthetic influences by becoming the basis of a new and interesting branch of craftsmanship.



No. 9—THE FINISHED RUG. Designed by A. M. HICKS. Worked by M. PACKER, SCHOOL OF INDUSTRIAL ARTS, TRENTON, N. J.

TREATMENT FOR LEATHER LETTER CASE

Emily F. Peacock

USE a rich brown Russian calfskin. Make the back and two sides in one piece, and leave a good margin outside the design. Dampen the leather with a wet sponge on the back and put on a piece of stone or marble. Go over all the lines with a dull outlining tool, making them strong and firm. With a small flat tool rub down the background firmly always making the strokes follow the shape to be set down, and following each other closely. When this has been done once dampen the leather again and repeat the process until glossy and very smooth.

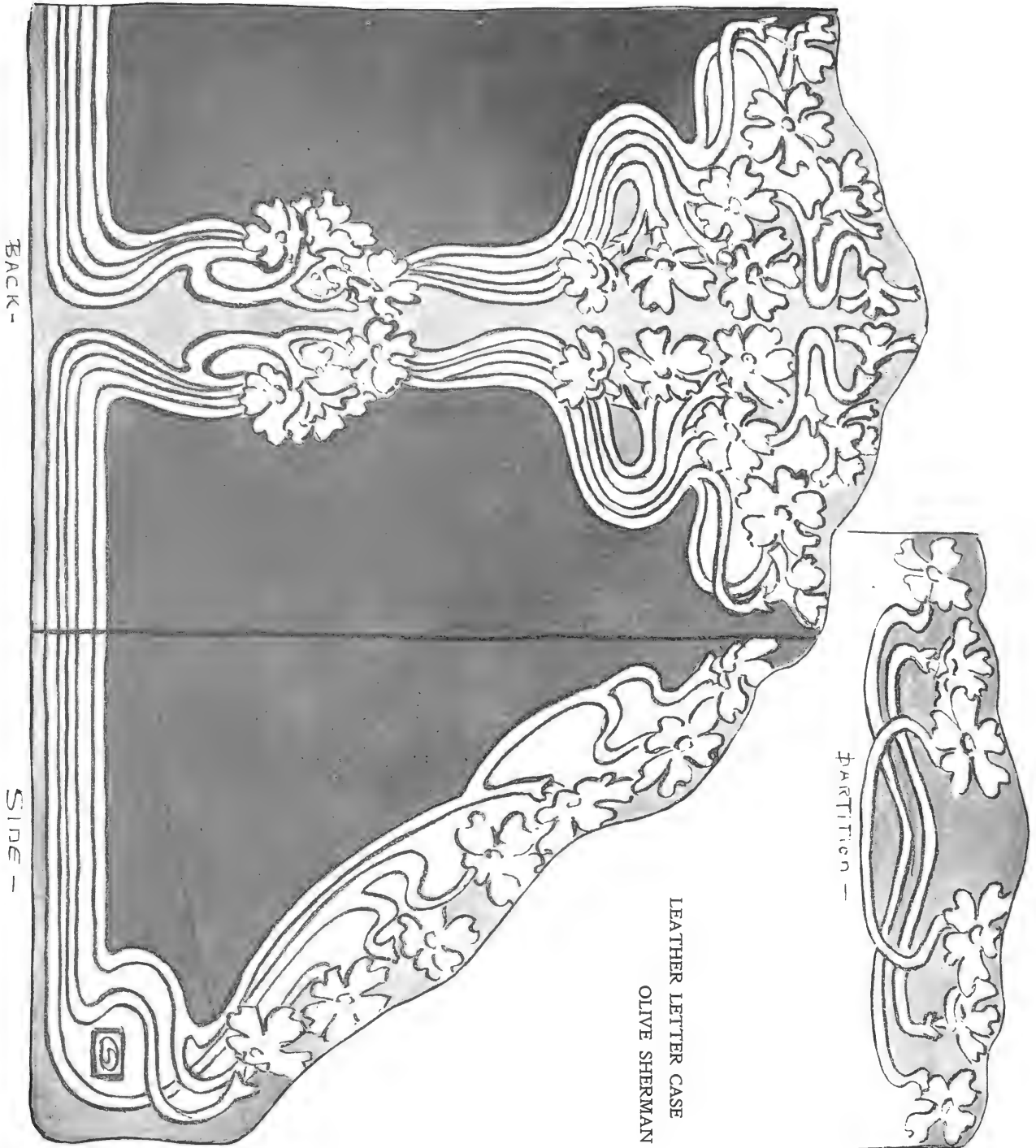
Put down the centers of the flowers and leave the dark part of the case perfectly plain. Use the same treatment in the partition, leaving the lower part plain.

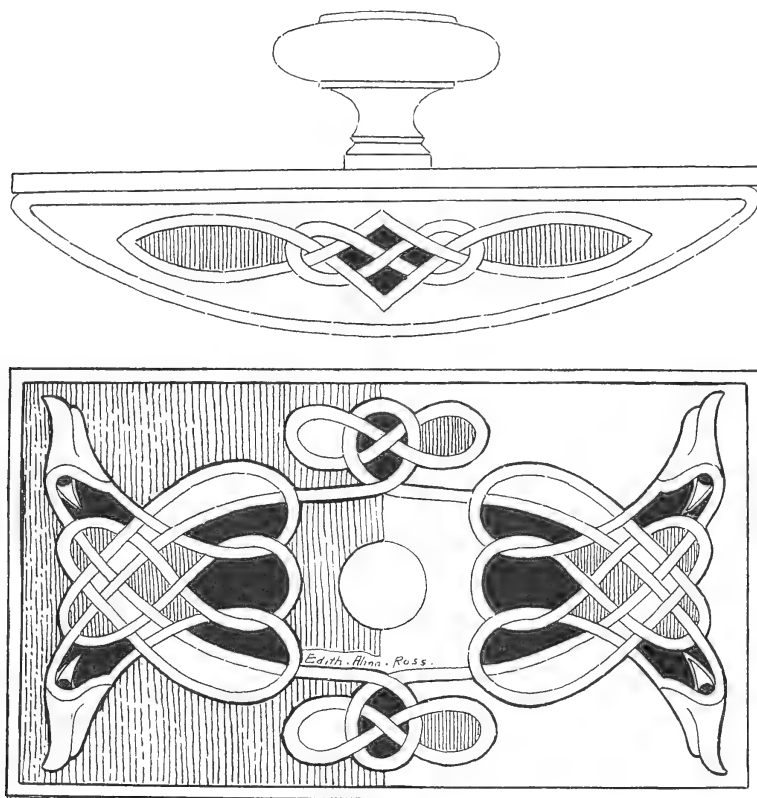
The case should be made up over heavy Bristol board and lined with thin leather.

A BLOTTER PAD IN METAL

Emily F. Peacock

USE copper or brass about gauge 24. Cut each piece large enough to allow $\frac{3}{4}$ of an inch margin all around the design. Trace the design on the back of the metal and put on cement as described in the June number, page 49. Go over all the lines with a broad outlining tool, taking care that the path-





BLOTTING PAD FOR PYROGRAPHY OR METAL—EDITH ALMA ROSS

ways go over and under in the right way. Repousse slightly between the lines with a larger tool, not trying to get high relief but a nicely rounded surface. Take the metal off the cement and put back again working now on the right side. Set down the metal in the background along the outer lines, also along the inner lines of the light spaces in design. Excepting the heads in the four corners both dark and light spaces here should be repoussed, setting down the white spaces in the eyes. Use the larger tool for this work also, excepting in the smaller spaces where a smaller tool of the same design is necessary. Cut out the 14 black spaces left with a saw, also the circle in the center where the handle is screwed on. File all the edges very smoothly and mitre the corners. Bend over the margin on the anvil with a rawhide hammer. Put the metal on the wooden frame and with a burnisher or with a piece of hard wood turn it smoothly over the lower edge. To fasten more securely and finish the design, put a small round headed nail in each of the eyes. If copper is used a dark wooden frame would be better; if brass, a lighter wood stained a dull green would be effective, showing the color where the metal is cut out and on the handle. The handle may be decorated with a small disk of metal, or left plain. Treat the side pieces in exactly the same way, turning the margin over the frame with a burnisher and fastening with a few small tacks along the edge. When both pieces are finished cover the pad part with two thicknesses of blotting paper. Turn the edges over the ends and fasten with small tacks. Put the top on and screw in the handle.

ANSWERS TO CORRESPONDENTS.

J. W. H.—Fat oil of turpentine and Dresden thick oil of turpentine are very nearly the same preparation and are both used in tinting, in mixing powder colors and gold.

English china is very difficult to fire—we would not advise amateurs to use it. It is too soft even for our overglaze kilns, needs a special stacking and firing.

E. F. Y.—We have in preparation a number of small studies of different colored grapes, to be used as supplement in the spring. A full description of the method of painting will be given with them, we regret that we will be unable to give the treatment before.

G.—The style of lustre work to which you refer is rapidly going out—rococo scrolls are rarely seen in any kind of china decoration now. The color effect is first worked out and fired—yellow over rose, dark green over ruby, green over purple, etc., combined with some plain lustre, such as green or ruby. Then the scrolls are sketched on free hand in gold or a darker lustre and when dry touched up with black, it has been found a convenient way to conceal defects in the lustre but is very bad art.

Mrs. S. V. W.—The soft enamel needs a light fire but the Aufsetzweis white or tinted with color will always stand the hottest place in the kiln. We will give a good color study of poppies as soon as we can get one.

Mrs. W. A. O.—The materials for glass decoration should be especially prepared for glass and can be obtained from wholesale dealers in art materials anywhere. We can not answer your inquiry in regard to salary and wages paid to workers in a factory, that is out of our line—we deal only with individual workers, so have no information on the subject. In regard to building a kiln for glass you had better write to some of our kiln advertisers, they will have all necessary information. We have no designs especially for glass though many of our designs might be adapted to that material.

KEEP THE FIRE ALIVE.

KERAMIC STUDIO

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR.

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KERAMIC STUDIO

Vol. V, No. 10

SYRACUSE NEW YORK

February 1904



As the time approaches for the election of officers for the New York Society, and discussion is heard in every studio as to possible candidates, the suggestion is advanced to select as president some progressive worker, an authority in modern ceramics but not in any way in competition with the members of the society—that is, not depending

on decorating or teaching ceramics for a living. Such a president would feel at liberty to urge the members to their best endeavor without incurring the accusation of working for personal advancement. There would be no room for personal feeling to hinder advance in any line. Doubtless such a person would be difficult to find and when found would hardly be persuaded to serve.

It is strange how almost impossible it is to give and receive frank criticism among ceramic workers. An under current of personal feeling is always suspected. It is not so in the art of painting pictures, and usually it is the greater artist who is most willing to admit room for criticism and really is glad to receive and benefit by it. Surely this consideration at least should speak for a disinterested head to the ceramic clubs, to whose judgment the members would be willing to defer, knowing that it would be to their interest.

Why would it not be a good idea for the New York Society to have a Christmas Bazaar every year at some fashionable hotel where everything sent in would be arranged, irrespective of the artist, so as to show to the best advantage, the name of artist and price being only on the bottom of piece; to this could be sent everything that the members might wish to sell from 25 cents up—and make this a paying thing—then in March or at the time of the other spring exhibitions, have a special exhibit at some art gallery, with a jury of artists and for this the members could show their best work only and so gain recognition from the art loving public and artists. The present mixture of bazaar and exhibition brings neither such money nor honor as is deserved.

We had the pleasure, the other day, of examining some of the new Pewabic art pottery made by Miss Mary Chase Perry of the National League of Mineral Painters. It is charming and bids fair to make a national name for itself. It will be interesting, by the way, to readers struggling with pottery work in the studio, to know that this ware with its artistic glazes is fired in the large Revelation pottery kiln. We hope later to give an illustrated article on this interesting work of a woman potter. Surely the American woman is the artist potter of the future, as she was of the past in America.

The design for mirror in the January K. S. was executed by Miss Jeannette Kimball instead of by Miss Soule, as printed.

Anyone desiring a sample of the P. N. body of Sèvres referred to by Mr. Doat in his articles may purchase it at cost, together with the glaze, from the Ceramic Studio Publishing Company. The body costs with duty, transportation, etc., five cents a pound, the glaze twelve cents a pound.

At this rate it would not pay any one to import the material for studio purposes, but the body could be analysed and an approximate mixture made of American materials.

THIS MONTH'S SUPPLEMENT

The Supplement for February is an unusually fine reproduction of a color print by the Japanese Artist, Hiroshigi, published to accompany the article on color by Mr. Hugo Froehlich.

It is worthy to be framed and hung in one's sanctum sanctorum as a continual joy and inspiration. Mr. Froehlich suggests a mat of pongee silk with a narrow black or brown wood frame.

Another good and inexpensive way of mounting would be to use a mat of buff manilla paper in a passe par tout with a black or brown binding. Be sure that in any case the opening of the mat leaves no margin of white about the print.



FOR some months, in the League Notes, appears the statement that we hope the next time to present definite dates and information concerning the St. Louis Exposition, but we who are endeavoring to secure these, find them most elusive. Each thing has proved to be a will-o'-the-wisp which we have followed without reaching, but we now hope that by the time this number is issued, the long-looked for circulars will be in the hands of the clubs.

It will be necessary that the exhibits on the lines of the League course of study shall be in New York the first week in April. It must be emphasized and remembered that *only* original work will be accepted.

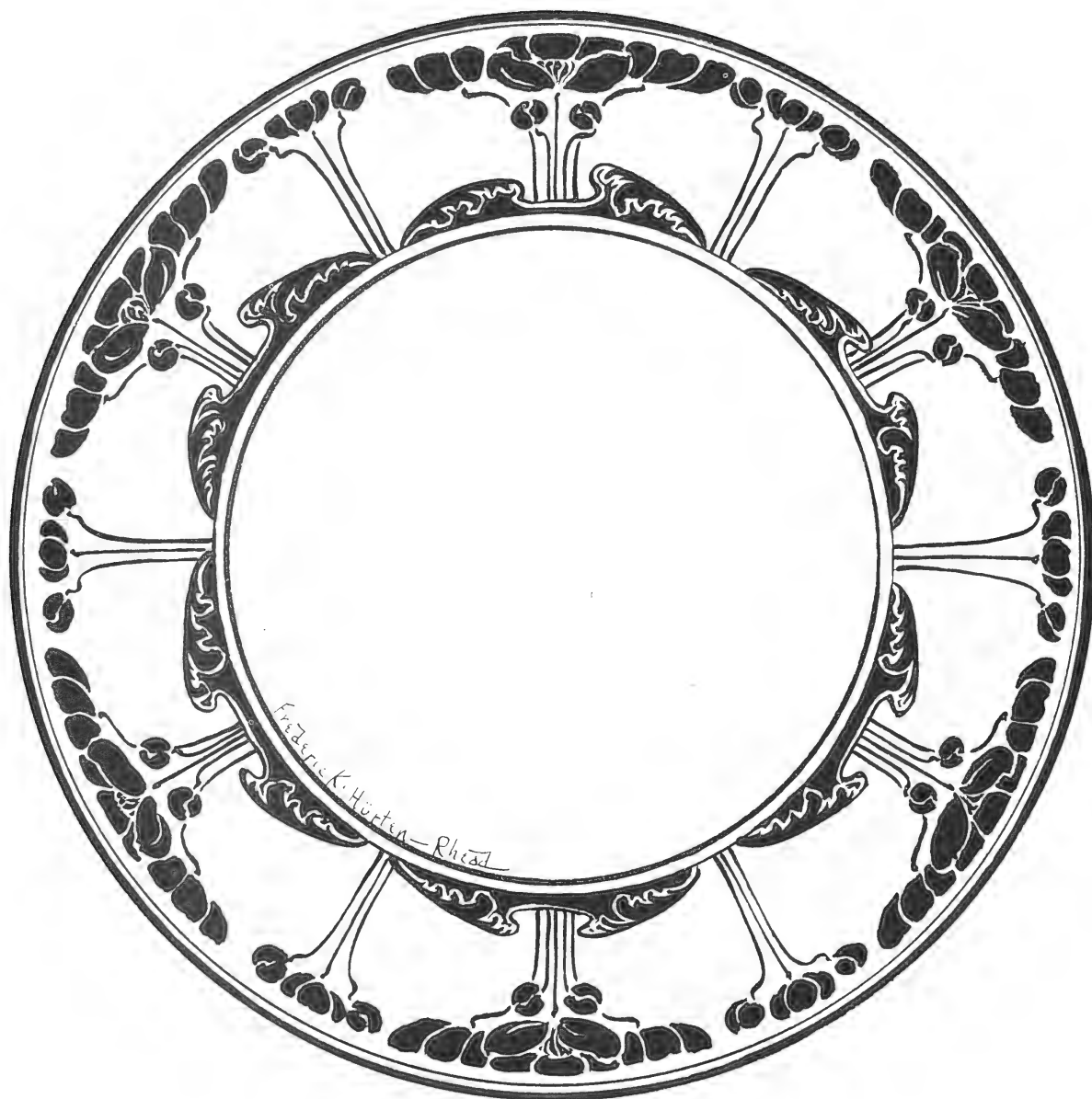
The League travelling exhibition has finished its western trip, and is now on its return. We regret to say that the connections according to the schedule were not always carried out, but not through the fault of the committee. One club did not receive it at all, and to another it came twenty-six days late. A moment's reflection will make apparent the inconvenience and expense incurred.

The committee is endeavoring to ascertain where the responsibility lies for these unpardonable happenings.

Even with these drawbacks, the verdict has been, as far as received, that the exhibition has been helpful.

As there is considerable time before April, we earnestly urge all to put forth their best efforts, that we may mark this exhibition, as we have those in the past, with a long stride forward.

IDA A. JOHNSON, President.



DESIGN FOR PLATE—F. H. RHEAD

Flowers orange, center French brown, stems sage green, leaves dark green, dark space behind leaves, and line at edge of plate in gold.



DESIGN FOR PLATE IN CHERRIES—JEANNE M. STEWART

It is important in painting cherries to keep them bright, crisp and transparent. Dresden Yellow, Red and Pompadour 23 will make the brightest tone, shaded to pompadour with Stewart's Pompadour and a little Ruby Purple in darkest cherries in shadow. Lemon Yellow is used in lightest tones also a little Yellow Green in those cherries not ripe.

The usual greens are used in the leaves with Yellow Brown, Chestnut Brown and Pompadour where an old and withered

effect is desired. The background may be kept in soft, greys or greens, keeping it very dark at one side or under prominent portion of design.

The lightest side should be padded off into a delicate ivory yellow so none of the white china is left.

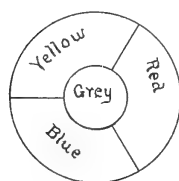
A few shadows thrown in in last fire with a grey made of S. Pompadour and Banding Blue, padding some of the edges into the background, gives a pretty finish.

PRINCIPLES OF DESIGN

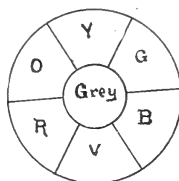
Hugo Froelich



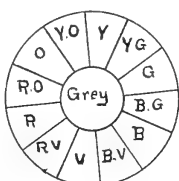
EVERYTHING about us is seen as some color shape. It may be some delicate tint or some subtle shade but it is *always* color. Without going into the scientific analysis of what color is, we may accept the artist's division which is the only one that interests us, namely the division of red, yellow, and blue as the primary colors. They are called primaries because all possible color combinations are made by mixing certain proportions of any two or three of the primaries. Thus by mixing Y and R we get O., Y and B produces G while B and R yield V. In the center of the circles is a smaller circle marked grey. As everyone knows, if a certain proportion of R, Y, and B is mixed, grey must be the result. In No. 2 where six colors and a central grey are shown a further fact is brought out, namely: that if we take any color in this



No. I



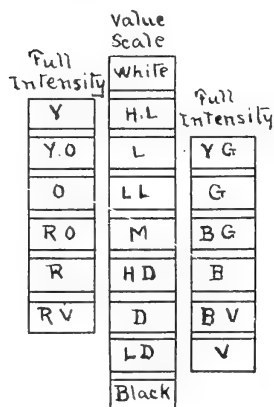
No. II



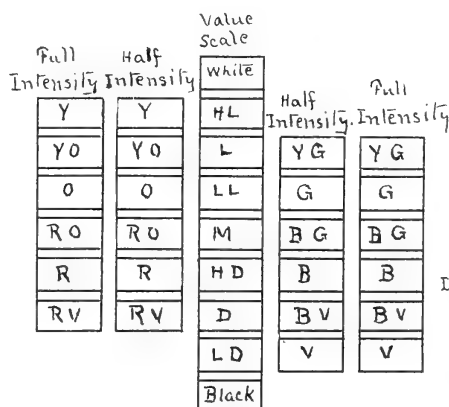
No. III

circle and mix it with the color directly opposite, across the circle, a grey will result. For instance Y and V=Grey, G and R=Grey, and O and B=Grey.

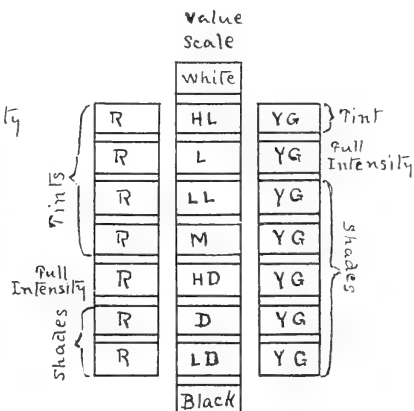
These three couples are called complementaries, because the use of a color near its complementary in a design or picture tends to intensify both. In circle No. 3 twelve colors are shown Y and O=Y.O., O and R=R.O., etc. If the colors were actually painted in their full intensity, we would see that Y is the lightest, while V is the darkest, and the other colors range from light to dark between the two. This is better expressed in No. 4 where the warm colors are placed on the left side of the value scale (see Oct. number K. S., page 128 for value scale) and the cold colors on the right side. By this scale we see that Y is of the same value as HL; YO and YG=L; O and G=LL; RO and BG=M; R and B=HD; RV and BV=D; V=LD.



No. IV



No. V



No. VI

But in nature we find the full intensity of colors a small proportion indeed as compared with the grey colors, so that it becomes necessary to add another scale as in No. 5 showing the relation of greyed colors to both the Value and the Full Intensity Scales.

And lastly we know that any color may have a range from HL to LD, as red for instance in No. 6 is at its full intensity at HD yet it has tints of red up to HL, and shades of red down to LD. Yellow green has its full intensity at L. Hence it has only one tint and five shades according to our division. (For this color arrangement the writer is indebted to Dr. Denman Ross of Harvard University.)

The question that nearly every reader will ask, namely, what is the meaning of all these scales? How will they help in the color study? In themselves these scales are not art any more than the musical scale of eight notes, with clefs, bars, measures, etc., is music. But they form an instrument whose use can be the means of a better understanding of color and a placing of the color notes, together with a nomenclature that approximates a universal color idea. For instance, if a design is to be done in black, green and grey violet, I may get as a result the widest range of blacks, greens, and violets and most of them would be discordant; whereas the same color scheme expressed in the following terms: Black, blue green of low dark value and blue violet of middle value and one half intensity, or the same scheme abbreviated as

Black-BG-BV
LD M
 $\frac{1}{2}$

would give an approximate notion of the colors used. In the same manner the color scheme of the Japanese print in this number can be expressed by

YO RO YG BG RV R
L LL HD D HD LL
 $\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{2}$

A painting by Titian may be similarly analyzed. A rapid note of any good color combination may be fixed in this way. If some fugitive out of door effect is to be remembered, a hasty outline sketch may be made of the landscape with color notes showing their location in the scale, their intensity and their position as tints and shades. At first sight these scales seem bewildering. The cure seems worse than the disease. But it only seems so; for in reality it is not difficult to learn, and once mastered, is of great help in the study of color.

Color is at once the most fascinating and complicated of all

art study. Out of the thousands of possible combinations, it is difficult to know which are fine and which commonplace. Take any two colors such as green and violet and you will easily see how there may be numberless combinations of these. How the violet may incline to blue or red, and the green to yellow or blue, how they may be at any stage of grey, and lastly how they may be tints or shades of green and violet. Very much of one's personality enters into this choice. Out of these endless combinations to be able to select the best, requires judgment and taste; for we can readily see that the majority of these arrangements will be anything but good color. If such a variety can be produced with only two colors, what possibilities open before us with three or more colors.

Our image of any two or three colors is much more limited than we think. For example if the question were asked: how many combinations can you think and make of blue and green? The number will not be very large. But if you consult Scale No. 4 you will see that blue may have quite a number of qualifications between blue green and blue violet and still be a blue. The same is true of green. It may have a range between yellow green and blue green. According to Scale No. 5 blue may have any of the effects according to Scale No. 4 plus any degree of intensity from a blue as strong as it is possible to make it, passing to grey until its identity is almost lost. See what a great range this gives you. But there is still another way of modifying the color. According to Scale No. 6 blue may have any of the changes possible in Scales Nos. 4 and 5 and pass from almost white or a mere tint to almost black or a shade. These three scales make combinations without number. Instead of a limited scope of colors as we are apt to have, it gives the entire field of possibilities to choose from. Now the question arises: How are we to know good color? In this, these scales do not help us nor can they any more than the scale of notes can help us to understand good music. For this we must go to the past and to nature. The past with its treasures offers the greatest sources of inspiration. As far back as the time of the Egyptians we still have remnants of designs, buildings, carvings and fabrics whose color is splendid. Each nation in its turn has contributed to this wealth, expressing their personalities and the influence of their environment. Especially rich in this respect is the art of Italy during the 16th century. The greatest painters lived during this period and left works that baffle the artists of to-day. The Guilds too, flourished at the same time and raised every household article and weaving apparel to the dignity of a work of art, many of which have become our inheritance.

Some remnants of Florentine brocade, bits of rags are carefully preserved under glass in our museums because they contain the whole grammar of art. Like the paintings of that period they contain the language of line, mass and color and conform to the laws of beauty.

The Chinese and Japanese have contributed quite as much to our sources of art as the Middle Ages. Every article that they produced was an art expression. Their prints were little songs of line, mass and color. So complete they were in composition, so well interrelated every part, that if a piece of white paper be taken and a rectangular opening of 2 x 3 inches cut in the same, then placed anywhere on the print, that part of the print appearing in the rectangle will be a perfect composition as to line, mass and color. Beautiful little schemes can in this way be selected.

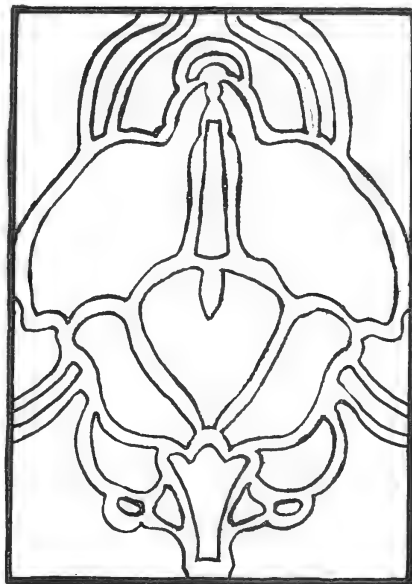
Lesson. Problem I. Choose one of these rectangular schemes taken from the Japanese print in this number and copy it exactly on water color paper. Just beneath draw as many rectangles as you find colors in the print and place one color in each rectangle. Write the abbreviations under each color.

This forms one of the best methods of studying color and at the same time develops technique.

In acquiring the technique many difficulties will be encountered but patience and a few trials will overcome these.

As by practice the mind acquired the power to express the line beauty found in flowers and landscapes, so in copying fine color the mind absorbs these schemes and makes use of this experience in future work. This is of the greatest importance and is sure to lead to a fine color sense.

Problem II. Use any flower motive; resolve it into facts and make some arrangement similar to the design in fig. 7 or, this design may be used. The size of the rectangle may be 3 by 4 inches. Copy your rectangle and design three times making three separate exercises. In the first use any three colors found in the Japanese color scheme in problem I. In the second any three colors not used in the first. In the third use one color of the first and two of the second. This gives a delightful use of good color in our own designs.



No. VII.

NOTE:—For convenience in studying the charts it is well to learn the abbreviations of the names of the colors viz: yellow is Y, yellow orange is YO, orange is O, red orange is RO, red is R, red violet is RV, violet is V, yellow green is YG, green is G, blue green is BG, blue is B, blue violet is BV. The value of a color is expressed by the abbreviations of the value scale placed directly under the name of the color, thus a green blue of a low dark value would be written BG

LD.

The intensity of a color is expressed by fractions placed under the value of the color when it is a grey color and leaving the space blank if the color is full intensity, thus blue green of a low dark value and very grey, say $\frac{1}{4}$ color and $\frac{3}{4}$ grey would be expressed by BG whereas full intensity would be written

LD

$\frac{1}{4}$

BG and half intensity would be BG

LD

LD

$\frac{3}{4}$

Owing to the difficulties in reproducing accurate color

scales, it was found necessary to print the same arrangement but without color, placing its name in the space where the color ought to be. This plan makes it impossible to enter fully into the subject of color.

placed in the lower hallway, where the china can be inspected by all visitors. It is intended to make this arrangement permanent.—*Boston Morning Globe*.

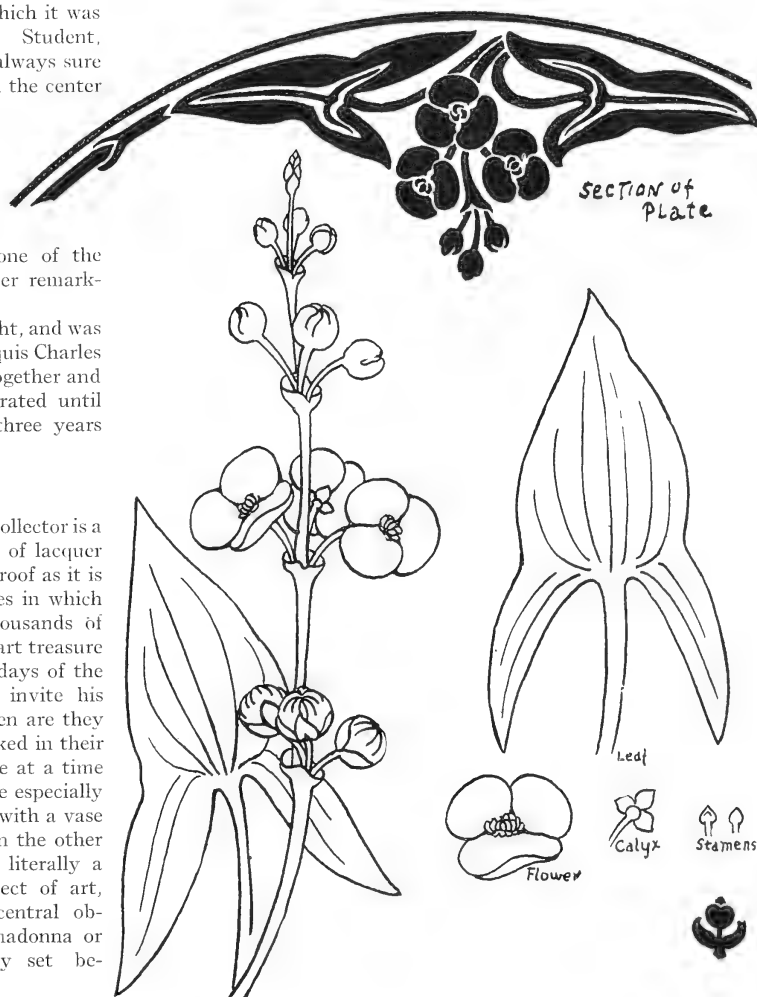
A FAMOUS VASE RESTORED

THE famous Francois vase, the most important monument of the temple of Solon and Pisistratus, precious example of Grecian art in the sixth century before Christ, has after years of toil been restored and placed on exhibition in Florence Archaeological museum. Connoisseurs are of the opinion that this most valuable and noted antique ceramique is more to be admired than ever before, since the 638 pieces into which it was broken have been so ingeniously put together. Student, artist and traveler, when visiting the museum, are always sure to enter the palace of the Crocetto, tarrying long in the center of the gallery, where since 1866 until the time of the great catastrophe which befell it in 1900, and which it was feared was irremediable, stood the celebrated Francois vase. This rare old specimen of art has a remarkable history. Signor Alessandro Francis found in October, 1664, two-thirds of the body of the vase, with only one of the handles. A year later he came across some other remarkable pieces, among which was the second handle.

Years afterwards another fragment came to light, and was handed over as a gift to the museum in 1866 by Marquis Charles Strozzi, when the parts previously found were put together and so firmly fixed that the vase remained undeteriorated until smashed into fragments by the blow received three years ago.

THE go-down, or storehouse of the Japanese art collector is a vault with thick plaster walls, a ceiling often of lacquer or cloisonné. In this treasure house or vault, fire-proof as it is thought to be from destruction in the paper houses in which they live, are placed in cases, hundreds and thousands of works of art, lacquer cabinets, and every species of art treasure in which the Japanese are so rich. On the great days of the year each lord possessing these collections will invite his friends to a private view of his treasures, only then are they ever seen together. They are then carefully repacked in their cases, and stored in the treasure house, one picture at a time being taken out to fill the alcove recess in the house especially made for it; on one side of the alcove a small table with a vase in which is set a single rose or chrysanthemum; on the other side of the alcove the "okimono," which means literally a placed thing, but always indicates a special object of art, statue or vase of size. Thus the picture is the central object, framed appropriately and like a theme of madonna or deity, having its offerings always harmoniously set beside it.

In the museum of the Brooklyn Institute of Arts and Sciences, is now to be seen what, according to its donor, the Rev. Alfred D. Pell, is the most complete collection of representative chinaware on exhibition in the world. On the shelves in artistic arrangement are pieces coming from every factory that has made china from the earliest times of its European manufacture to the present day.



SAGITTARIA DESIGN

Lucia Soule

The collection of historic china in the White House is to be placed on public exhibition. The collection is large and valuable. It is now stored away on upper pantry shelves, where it is seldom seen. Women visitors to the White House always ask to see this china, but it has heretofore been impossible to gratify their wishes.

Mrs. Roosevelt and Col. Symons took the subject under consideration, and decided to have glass cases prepared and

TINT base a cream tone shading into a light dull green at top; flowers, white; leaves and stems, dull green and centers of flowers yellow; dull green rims and handle. Or tint top a grey blue and carry out design in a darker tone of blue grey.

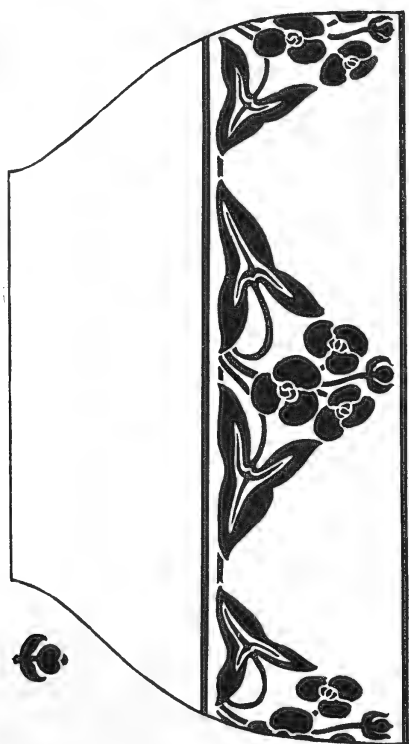
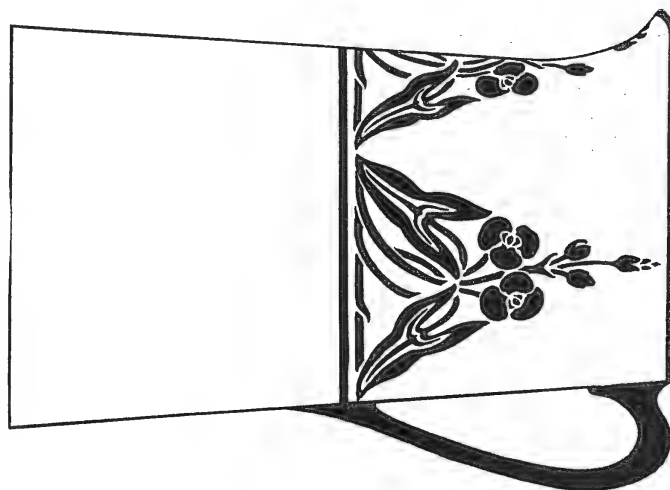
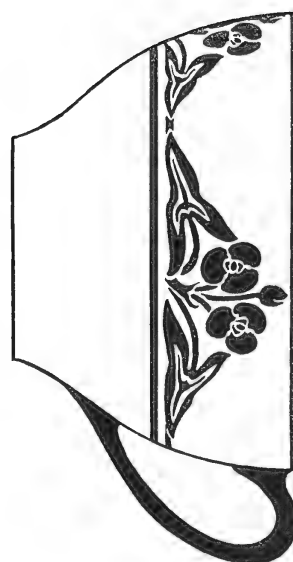


FEBRUARY 1904
SUPPLEMENT TO
KERAMIC STUDIO

LANDSCAPE—HIROSHIGI

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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KERAMIC STUDIO PUB. CO.
SYRACUSE, N. Y.



SAGITTARIA DESIGN—THIRD PRIZE—LUCIA SOULE

THE EXHIBITION OF THE NEW YORK SOCIETY OF KERAMIC ARTS

WHEN we consider that four years ago the status of china decoration was on a par with crocheting, embroidery, drawn and other fancy work, the progress in design, color and execution shown in this year's exhibition of the New York Society is truly remarkable.

There is evident an earnest desire to know and do the right thing, and in spite of the fact that a number of good workers did not take part, the average of excellence was considerably higher than at any previous time.

The figure work was excellent as always, Mrs. Vance Phillips and Mr. Francois Meine being the chief exhibitors. The work of Mr. Campana, while forceful and showing masterful technique is difficult to understand from the view point of decoration. The exhibit of pottery was disappointing, Mr. Fry showed only a few small pieces and Mrs. Vance Phillips the original and reproduction of a stein.

Mr. Fry's overglaze display, however, was a revelation, not only to china decorators but to artists and crafts workers in general. Such a keen and delicate understanding of the subtleties of color harmony is rare in any art and places his work on a par with the best painting in any medium.

The finest, perhaps, of his pieces was a tall vase

with a moonlight effect of trees and water, there was a mystery and fullness of color in its purple greens that showed a deep appreciation of the poetry of nature.

In technique, however, the vase with the band decoration of willows and landscape was more fascinating, the subtle play of color from grey green through the grey browns to a quaint and rich grey yellow body color was something that needs to be seen to be appreciated.



MARSHAL FRY



MARSHAL FRY

An ice water pitcher with a design of narcissus in soft grey white and green on a black ground with a touch of yellow and yellow brown in center of flowers, was masterly in execution, the design, while clearly silhouetted was so skilfully greyed that there was no sharpness of outline. The other pitcher with a band decoration of grapes and grape leaves was equally successful.

As compared with the subtlety of Mr. Fry's work, that of Miss Maud Mason appeals to one as bold and forceful. The color is charming in its quaint tones and combinations, the drawing is clear cut and strong and the finish is that of a master hand. The vase with elder blossom decoration was possibly the best. It was a symphony in grey greens, and quite native in feeling. The vase with birds while showing fine handling and interesting brown and grey and grey pink color suggested the Japanese influence while the tall vase with poplars suggested



MARSHAL FRY



MAUD MASON

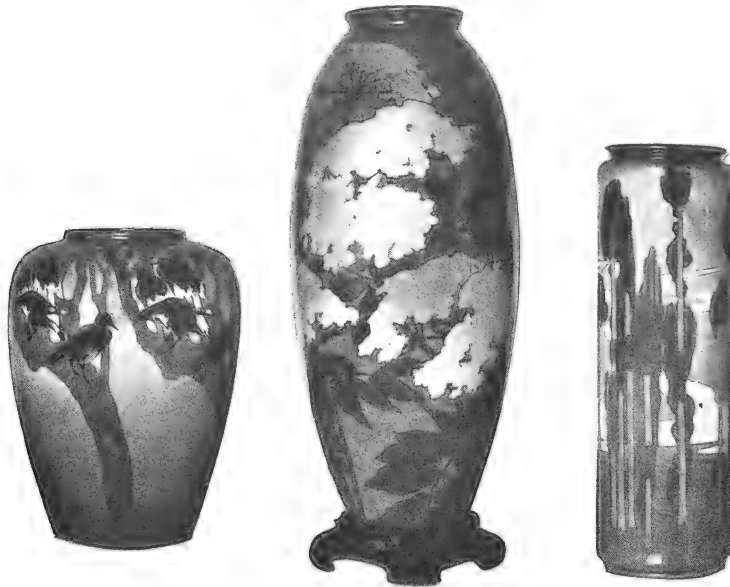
an Italian or other foreign landscape rather than American but was cleverly executed.

A number of fine plate borders were shown and two quaint bowls and plates in a grey white with blue decoration of pine

Miss Ehlers showed some carefully and pleasingly executed table ware in Chinese designs, as well as some good lustre work. Miss Hörlocker had a very interesting vase in Tansy semi-conventionally executed in orange red on a dark green ground. Unfortunately the colors would not photograph or we should have reproduced it.

Miss Genevieve Leonard showed a dainty comport decorated with a simple band of mistletoe in flat enamels. Both Mrs. Fry and Mrs. Neal showed some interesting effects of lustre over gold. Mrs. Paist exhibited some painting on the biscuit which was interesting but not quite satisfactory in texture. Mrs. Price also exhibited some good plate designs, especially one in elder blossom, but did not show the work we expected from her, judging from last year's exhibit.

Many regrets were expressed at the small exhibit of Miss Elizabeth Mason whose work, executed with a technique quite beyond criticism, has always been one of the prominent features of the New York exhibit. However, the pieces shown quite made up in excellence what they lacked in number. A tall vase with a strictly conventionalized lily motif, in lustres, was



MAUD MASON

tree and ship motif. These however, while designed by Miss Maud Mason, were executed by Miss Elizabeth Mason.

The plate border of trees and clouds was particularly successful in color; a quaint combination of grey yellow green trees with greyish pink clouds and a grey purple blue sky with design outlined in black. The colors used by both Miss Mason and Mr. Fry, while quite different in application are almost indescribable in tone; this constitutes their chief charm.

The exhibition of Mrs. Sara Wood Safford showed a number of stunning combinations of silver with lustre decorations, of which perhaps the tankard and stein with cherry decorations were the most successful. The most attractive piece, however, was a little Satsuma bowl with a semi-conventional treatment in grey blue and pink flowers with a stem division running to the base at regular intervals. This is quite Mrs. Safford's own style and while her lustre and silver work is individual, this special treatment of flower decoration seems a more satisfying exposition of her art.

Three dainty flower panels framed in black were most skillfully and charmingly executed both in color and technique.

unusually good, a bowl with reddish orange design on a black ground was striking and Indian in character, a little teapot with Chinamen in black and orange lustre and a black stein



SARA WOOD SAFFORD

KERAMIC STUDIO



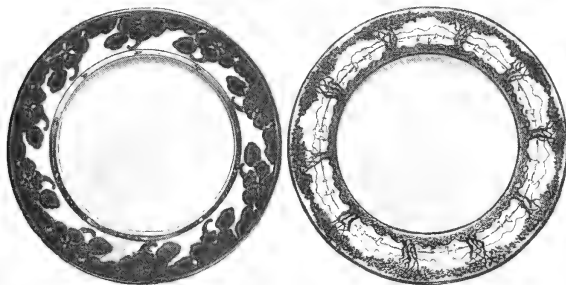
MARIE CRILLEY WILSON

with design of beetle in raised gold and enamels were particularly good. The two bowls in pine tree and ship motif were unusually attractive.



ELIZABETH MASON

Mrs. Anna B. Leonard, as always, had a display of china particularly well adapted to table ware. She also is one of our individual workers. There is a style and finish to her table china quite her own and she will always be found among the leading workers of the New York Society. A number of attractive plates in color and in gold formed the greater part of her exhibit but a tea set with landscape decoration on a gold ground was a striking "pièce de resistance." A chop or fruit plate with orange and green decoration was particularly effective and a cracker jar in celadon ware with design in blue and green was very good in color.



ANNA B. LEONARD

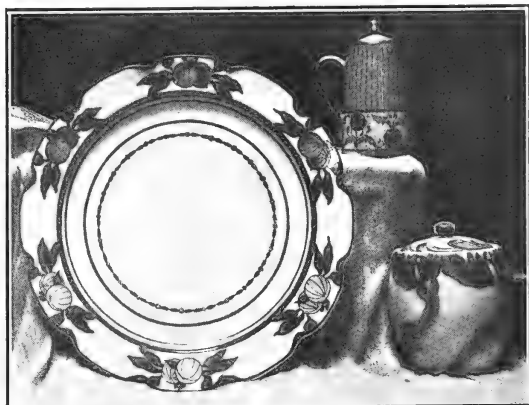
Mrs. Marie Crilley Wilson showed some unusually fine plates. The salad plate in shrimp pink, red and gold, was good

in line and color. The tree design in blue gave quite a "Chelsea" plate effect and was unusually good. The other tree plate was exceptional in color, which consisted mainly of a purplish blue and green ground with a touch of crimson and yellow brown in the flowers on trees. There were also a number of interesting steins and other pieces but none quite as satisfying as the plates. Mrs. Wilson while yet a new member of the Society shows promise of being before long one of our most original decorators.

Mrs. Cherry of St. Louis sent a few pieces in lustre and gold decoration which were unusually nice. We would be glad to see a more representative exhibit of her work.

Mrs. Lydia Smith exhibited a quaint and interesting teapot with a decoration of parsley in silver on black, also a quaint little sugar and creamer with conventional poppy decoration.

Miss Margaret Armstrong had an exhibit of work showing very promising technique.



ANNA B. LEONARD

For the honor of the society and the art of the china decorator it is to be hoped that these best workers of the New York Society will do their utmost to send a good and representative exhibit to the St. Louis Exposition.



From Finland comes a most striking ware patterned after the Arabian potteries. The pieces are cream color, in odd geometric shapes, with ornamental bands of geometric design, done in vivid reds, yellows, blues and greens.

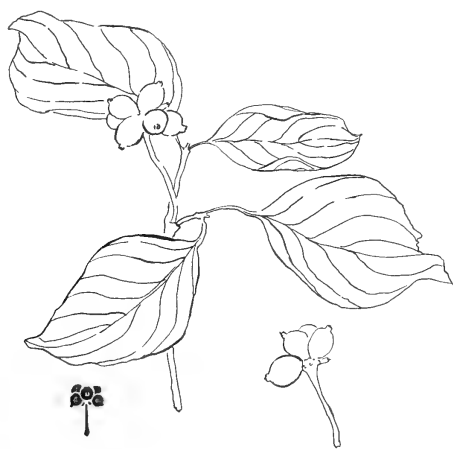


DRAWING OF LILY—RUSSELL GOODWIN



DESIGN FOR PERSIAN PLATE—KATHERIN LIVERMORE

IN the original, the center ground was black—to obtain a good black use Deep Red Brown for the first fire, for the second go over it with a mixture of black and Dark Blue. The entire design is outlined in raised gold, the forget-me-nots scrolls being modeled very daintily in the raised paste; use Dark Blue with a touch of Ruby Purple and Black for the large black form, introducing a green made of Apple Green and Deep Blue Green in the inner white space, the stippled space being light blue. The ground back of the forget-me-nots should be a delicate grey; introduce a few touches of Capucine in the outer border forms and the space outside of this should be gold.



TREATMENT OF DOGWOOD BERRY DESIGN

Mary Overbeck

GROUND back of border design, Yellow Brown, leaves and stems a rich blueish green. Berries and bands a purplish Blue, tinted ground, Meissen Brown, two tones darker than the yellow brown or a light olive green. For green use

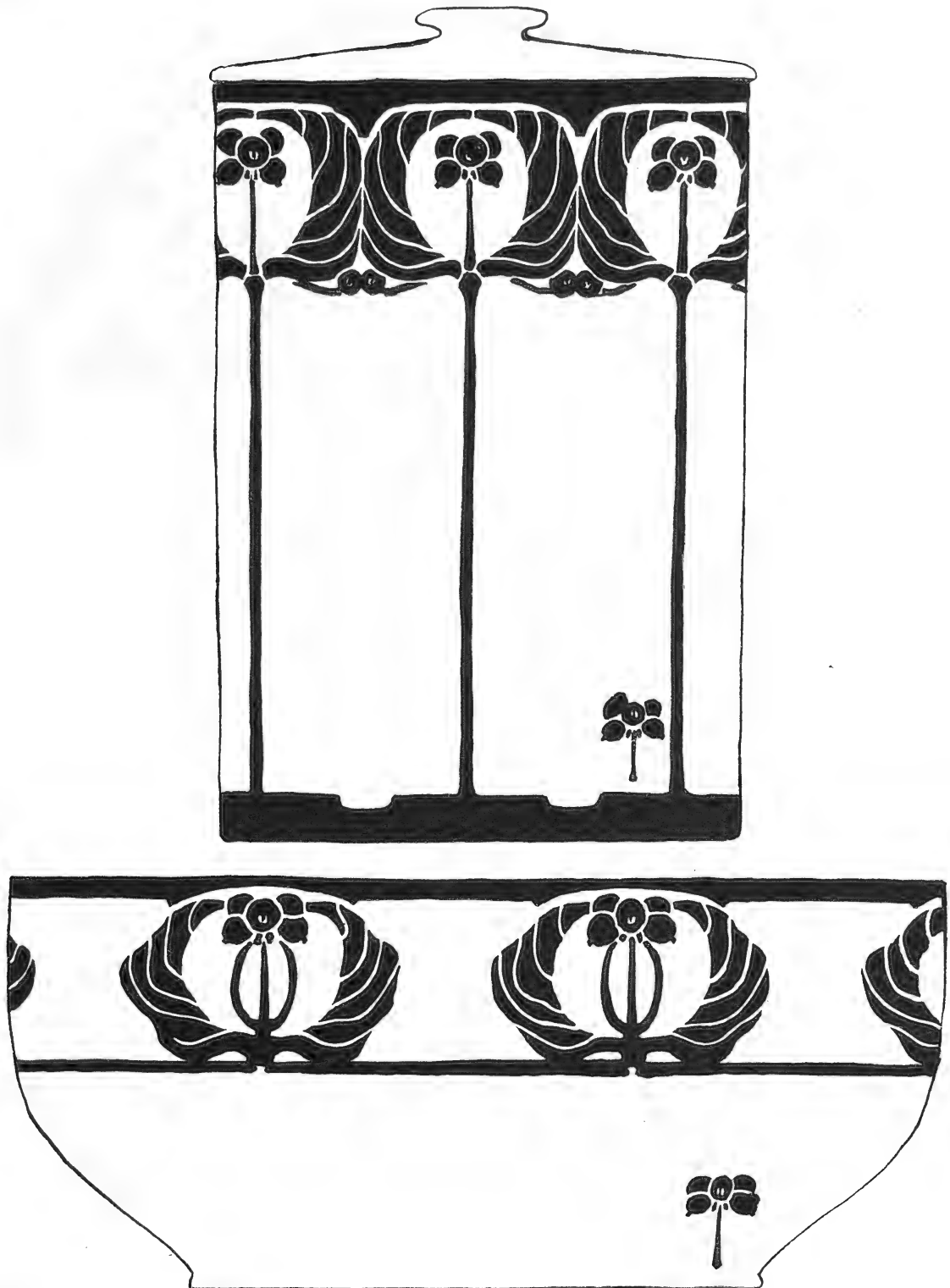
Royal or Moss Green with a little Banding Blue. For blue use Banding Blue and a touch of Ruby Purple.

Another treatment: Berries, dull red; stems, leaves and band around edge, yellowish brown; background, a light tint of the same. The whole design may be outlined in black, dark brown, or a dull gold.

EGYPTIAN ANTIQUITIES

A special exhibition of some of the more important of the recent acquisitions of the Egyptian department, Museum of Fine Arts, will be held soon. Owing to the crowded condition of the museum, it will not be possible to place all new acquisitions on exhibition in the present building. The first case of objects from the gift of Theodore M. Davis of Newport has been arranged, and it contains a considerable number of porcelains with a beautiful blue glaze, also a series of sceptres, a large vase with triple cartouche, two amulets, two cylinders, etc., all bearing the royal cartouche of King Thothmes IV. The rest of the recently received Egyptian antiquities are being prepared for exhibition. Among them are two small wooden figures of men and the wooden figure of a panther; a small wooden panel depicting in relief the goddess Muut and the lion-headed god Thoth; a funerary statuette of a king, two large canopic jars of limestone, a series of glazed objects of the first dynasty, a glass head of Rameses III, set in plaster, a group of slate palettes in various forms, a number of useful and ornamental objects in alabaster, a series of prehistoric pots decorated with geometrical designs, flint weapons, etc. Mr. A. M. Lythgoe, the curator of the Egyptian department, who is now in Boston, will leave for Egypt again early in the winter. — *Boston Transcript*.

Old English Trentham ware is an effective revival of the year. Gayly colored fruits and flowers form the decorations on some pieces, while others show bees swarming to a hive or very black cocks with very red combs.



DOGWOOD BERRY DESIGN—MARY OVERBECK

GRAND FEU CERAMICS

VIII.—Kilns (Continued)

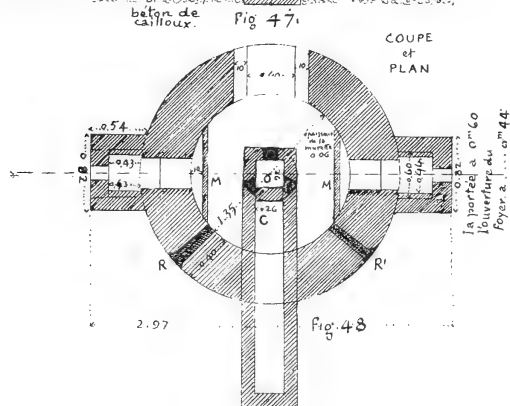
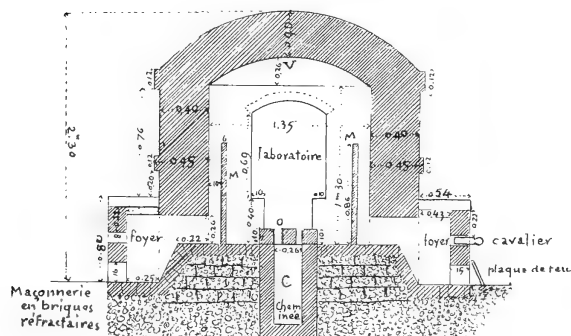
Taxile Doat

AS I had constructed my coal kiln in order to become familiar with the handling of a firing and to determine the adoption of my ceramic bodies, half of it was filled with white vases, either cast, pressed or turned, without decoration, but modeled with different pastes; the other half contained bas reliefs Wedgwood style and biscuit figures Sèvres style, the sale of which not only covered all the expense of firing but left me profits which I invested in new trials. As the kiln had up draft, the white pieces were placed in the lower part, so as to get the benefit of the highest heat, and the biscuits, which required a lighter fire, to avoid the glassy appearance, were placed in the upper part of the firing chamber, and every time pieces for the following firing were baked in the baking chamber.

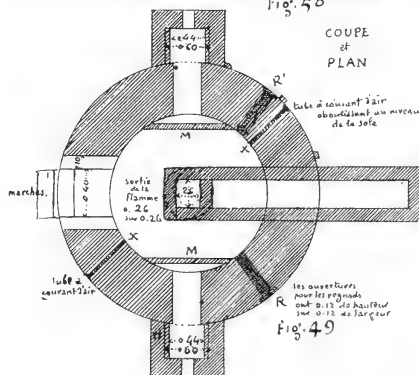
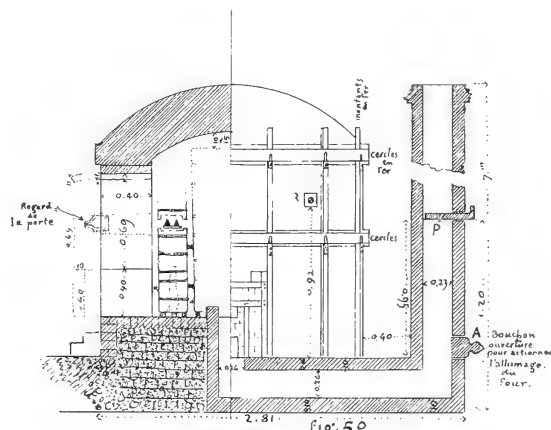
After I had logically and scientifically determined the porcelain and grès bodies which were best suited to my work, I stopped the period of trials, I destroyed my first kiln and built my second one, in my residence, at Sèvres. Experience having taught me that the up draft has the great disadvantage of compromising seriously the results by brutally striking with the most intense heat the bottom of the piles of saggars, thus making them liable to occasionally sag and to disastrously shake the other piles, also that the heat being unevenly distributed, there is between the upper and the lower parts of the kiln a difference of temperature which is sometimes more than 50°C., I adopted the down draft.

This second kiln, which I use now (Figs. 47, 48, 49, 50), is of the cylindrical vertical type, possesses two fire mouths placed in the same axis, and no baking chamber. I have left out the latter on the ground of economy. I am thus obliged to do a special firing for the baking of pieces, but the construction of a baking chamber would have made necessary a raising of my studio and the expense of chimneys in the thickness of the walls. I lose on this account a certain amount of heat, which somewhat increases the time of firing, but the kiln being reduced to its simplest form does not need such costly repairs, and is easier both to repair and handle.

When coming out of the fire mouth which is on a level with the floor of the kiln, the flame is violently thrown on a small wall M, cemented on both ends to the inside wall of the kiln and forming with it a segment of a circle (Fig. 47 and 48). This little wall being placed opposite the fire mouth, has a protective action, and besides it directs the flame, by stopping it and raising it toward the crown V (Fig. 47), from which it comes down between the saggars piles to reach the opening O of the chimney C, through which it escapes. While passing through the chimney, it strikes the only damper P (Fig. 50) the function of which is to control it. The heat, being better distributed in the firing chamber, becomes more homogeneous through the more intimate mixture of the gases of combustion. There is only a difference of about 20°C. between the top and bottom, so that the saggars do not suffer so much and do not need so much repairing and replacing. Three spyholes, two fixed ones R, R', and a movable one (that of the door), allow one to follow the phases of the firing on every side, by watching the Seger cones.



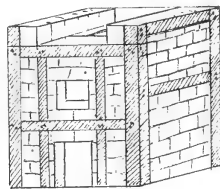
Four au Bois.



Four au bois.

Brigue refractaire, fire brick. Laboratoire, firing chamber. Beton de cailloux, pebble foundation. Cavalier, fire mouth stopper. Regard, spyhole. Bouchon, stopper to start the draft when lighting the kiln. Tube courant d'air, tube for air draft on the level of bottom of firing chamber.

As in the coal kiln, the chimney is braced with corner bands bolted together, two feet apart from each other. The fire mouths are solidly braced with iron (fig. 91) and the kiln



Armature de
l'alandier au bois
fig. 91

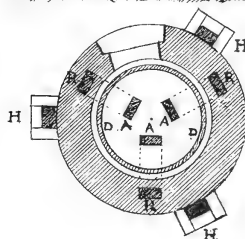
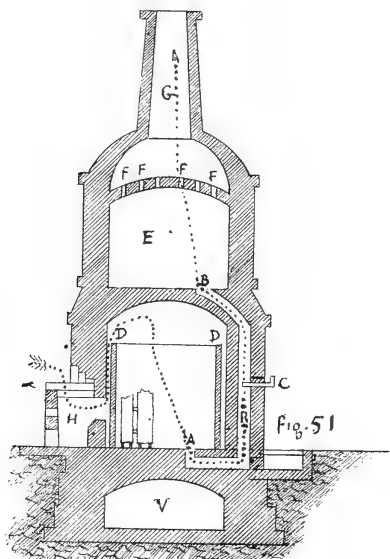
is strongly circled, the bands being $\frac{3}{4}$ of an inch thick and 20 inches wide. They rest on two iron supports $2\frac{1}{2}$ inches wide and $1\frac{1}{4}$ inches thick. The construction is made exclusively of fire bricks, brand J.B., cemented with a cement called in French *coulis* and made of

Earth of Provins pulverized	20
Grog of pulverized saggars	80

This *coulis* is sold by Mr. Ducouroy, Ivry-Port, Seine.

The damper is placed so that it can be reached by hand, being about 3 feet from the ground.

The most regular of the Sèvres kilns, an elevation of which



Four à flamme
renversée

I give (fig. 51), in order to emphasize the simplicity of mine, is built of J.B., has three fire mouths *H*, three chimneys *R*, constructed in the walls of the kiln; their three rectangle openings

are in *A* and they join each other in the baking chamber through the openings *B*. Each chimney has a special damper *C* acting directly on each fire mouth. Here the small wall *D* is circular. The baking chamber *E* ends in a vault pierced with many square holes *F*, through which the flame enters the central circular chimney *G*.

In vertical kilns the pressure of the gases of combustion against the inside walls of the kiln, is such as to make it necessary to use strong iron bracings, to enclose and strengthen the outside masonry of the kiln and prevent its bursting. Besides, in order to protect the construction against injuries by humidity, a small vaulted room has been built under the kiln in *V*.

The cost of this Sèvres kiln is about \$1,600, but its construction is of the best in regard to accuracy, solidity and even elegance. In opposition to this, I can give the details of the cost of my kiln, the figures of course applying to material bought in Paris:

Construction	Fr.	984,85
Material	"	425,30
Iron braces	"	458,65
		Fr. 1,868,80

or in round figures \$400.

Each firing consumes from 5 to 6 *steres* (cubic metres) of wood, equivalent to $1\frac{1}{2}$ to $1\frac{3}{4}$ cords, or on the average $1\frac{1}{2}$ cord, the cost of which in Paris is about \$24. The expense for labor, various materials, etc., being on an average \$40, brings the total cost of one firing to about \$64.

The kiln can hold 80 pieces of medium size. After three firings repairs to the average amount of \$6 are necessary.

Contrary to kilns with up draft, the temperature is higher at the top than at the bottom of the kiln.

As will be seen the cost in construction and fuel for such a kiln is far above that of the first kiln, and one will easily understand the reasons which made me adopt coal for my trials, notwithstanding the injurious effect of this fuel on decorated pieces.

There is an innovation which I will mention, although it is somewhat outside the limits of these articles, the adoption by the porcelain industry of gasogene kilns, the kilns of the future. Glassmakers and metallurgists have already derived great profit from these kilns which have the great advantage of economy in fuel and regularity in firing. If they are not more generally used for porcelain, it is due to the very large expense of installation. However a gazogene kiln is in use in Berlin, and another, of the Siemens type, has been established in Limoges and has given good results. The fuel is peat. The great economy in firing is due to the fact that the heat can be controlled at will, and that the reducing atmosphere can be instantaneously changed into oxidising, and vice versa.

The conclusion of this article is that those who have only limited resources, and are not expert ceramists, will do well to limit their expenses to the cost of the small coal kiln, the fire mouths of which, at the end of the trial period, can be transformed at a small cost into fire mouths for wood. But those who have sufficient resources, can avoid this trouble, by adopting from the beginning the plans of my wood kiln, to which they may add, if wanted, a baking chamber, keeping the same measures but having the chimneys built in the wall itself.



SHOP NOTE

We have received an interesting catalogue from James Hall of Philadelphia. Besides the list of materials it contains much practical instruction for their use.



The European potteries in the Ceramic room of the Museum of Fine Arts in Boston have recently been completely rearranged under the direction of Samuel B. Dean. This collection had grown so fast through bequests, gifts and loans that all the cases were overcrowded and effective display was rendered impossible. Consequently a thinning out was needed as a preliminary step for rearrangement. About 304 specimens were put out of commission, some of them permanently, others to await better accommodations at the new building. The remaining collection is smaller, but far more effective. Work from the noted potteries is now properly grouped, and only the very choicest specimens are shown. China collectors and others interested will find the rearranged cases very instructive.

The Museum's Wedgwood collection, which is very strong, now occupies seven cases; Italian Majolica, six; old Delft, two;

Hispano-Moresque, one, and so forth. One of the most attractive features of the new arrangement is the gathering of 18th century figures and groups, which are shown in three floor cases near the door to the textile gallery.—*Boston Morning Herald*.



As a tribute of friendship and esteem, Kaiser Wilhelm presented to Ambassador Andrew D. White a porcelain vase, the product of the famous Royal Porcelain Factory at Charlottenburg, near Berlin. It is a fine specimen of the beautiful ware which for several centuries has been utilized by European sovereigns in making gifts to the objects of their favor. The ware is a creamy white in color, with ornamentation in gold. On one side in colors is the bust of Emperor William in the uniform of an admiral, and on the other side is a view of the royal palace at Berlin. Beneath the bust of the Emperor is the imperial crown, and beneath the palace the royal crown.



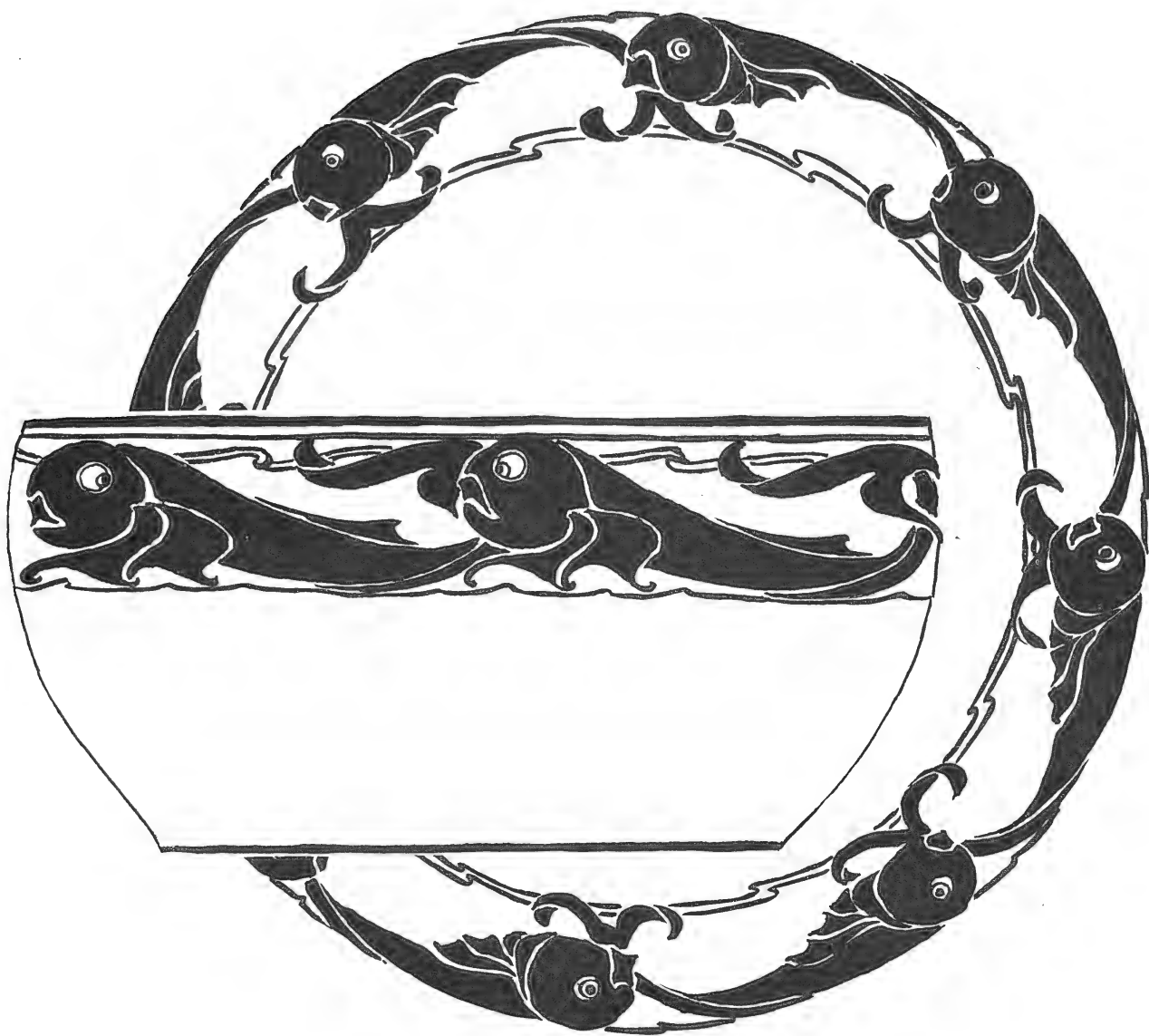
In Royal Doulton are seen pitchers and vases in extremely weird effects. These are tall and slender in shape and are colored a deep highly glazed brown. On one side of each is a mysterious figure done in full reds, yellows and black. A lean Pied Piper stalks on one, rats scamper about his heels and a stormy sky is suggested in the background. On another a witch in pointed hat crosses over a tiny black cauldron set in the foreground. From the pot a thin line of steam arises to curl in halo form about her head.



BLEEDING HEART (First Mention)

Emma Armstrong Irwin

PAINT background in grey for flowers, shading into dark green No. 7, the leaves and stems in moss, olive and shading green with a little violet of iron. The outer part of the flower is a delicate rose and the inner a creamy white with the dark seedlike sections at the lower part a mauve.



DESIGN FOR FISH SET IN BLUE AND GREEN—MARY SIMPSON



JONQUILS

Eunice Eaton

Lower part of Chocolate Pot to be dark green and growing lighter towards the top of the leaves.

Daffodils to be in yellow shaded according to nature.

Upper part of pot to be white with band of gold around the top.

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 6 Brevoort Place, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

SIMPLE FURNITURE

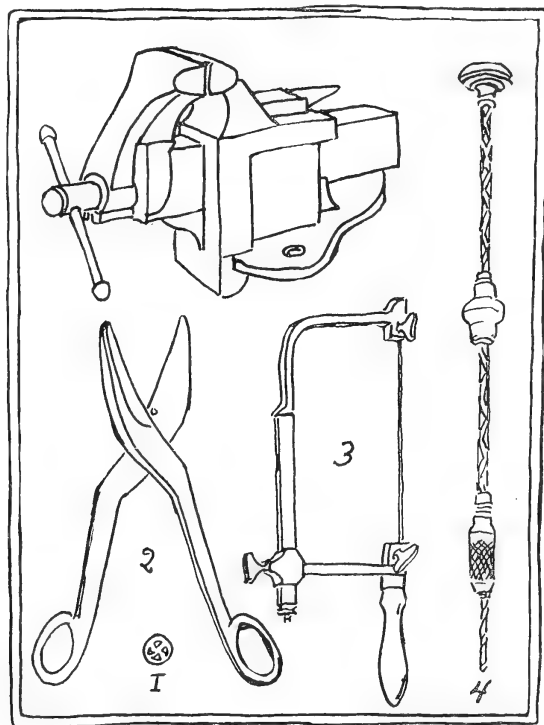
V—SIMPLE METAL FITTINGS

Elizabeth Saugstad

BRASS, copper, bronze and iron are the only metals we need consider particularly, as a wide range of colors and effects can be gotten with these by different treatments.

Polished brass is the best combination with mahogany. It goes well, also, with cedar and ebony and on green stained and light woods. With a green finish it looks well on all shades of brown from ivory to chestnut. Dull reddish copper is fine on black oak, walnut and deep green stains. Bronze from coppery to deep brown tones, is fine on walnut and green stains, and green bronze on fumed oak. Iron goes well with fumed oak of all shades, on green stains and red cedar.

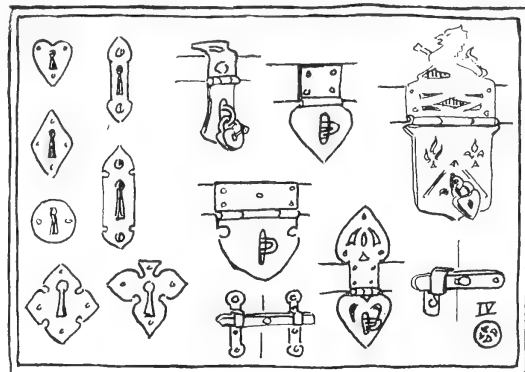
Beautiful effects can be gotten by piercing the metal in simple designs and putting bits of colored leather under the openings. A good scarlet or emerald green in small quantities under bright brass on ebony or black oak, or leaf green under dull brass on brown woods; olive and dull greens under brown bronze on walnut or oak; Indian red under iron on black oak or dull green stains, are all good combinations. If fine colored leathers are not available, thin suede sheepskin in the natural color, or fine chamois, may be stained with artists' tube colors diluted in benzine, brushing them on with a fine, rather stiff bristle brush.



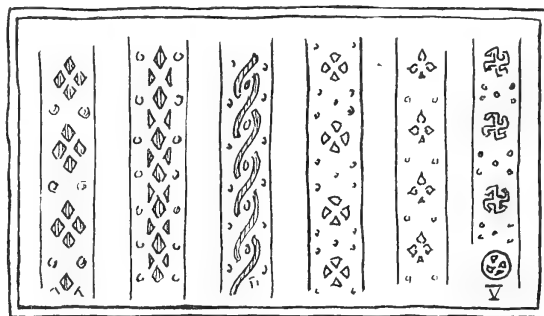
I.—Vise, shears, saw and drill used in metal work.

The metals mentioned come in rods and bars of different sizes and sheets of different thicknesses, or gauges, which are

numbered, the higher the number the thinner the metal. Anything thicker than 12 gauge would probably be more than the beginner could manage successfully, and anything thinner than 18 too light even for small boxes. It is better to err on the side of weight, as the sentiment of metal is strength and protection.



IV.—Some key plates and fastenings.



V.—Suggestions for pierced bands.

The following tools will be needed whatever the process of working the metals: A pair of shears for metal, at least 12 inches long, costing about 60 cents; a 6 or 7 oz. ball peen hammer, about 50 cents; 2 half inch cold chisels, one straight and one curved, about 15 or 20 cents; several files, 1 coarse and 1 smooth, 10 inches, 1 rat tail, 1 square and 1 knife edge, from 6 to 8 inches, costing from 10 to 25 cents; emery paper, F; countersink for screws; drill brace and 1 doz. medium assorted drills, from $\frac{3}{32}$ to $\frac{3}{8}$ of an inch, costing from \$1.50 up; a small bench vise with anvil attachment like the one in illustration I, costs from \$3.00 to \$4.00. A small, square, flat anvil can be bought separately, or the bottom of a flat iron may be used in an emergency.

A metal saw is not necessary for all work, but is probably the best way for cutting out metal over 16 gauge. It will cost with a dozen medium blades, about 75 cents.

In beaten metal work, iron and steel, if in rods or bars, are forged hot, and brass, bronze and copper, cold. The last three must be annealed before beating, which means heating them until they are red and then cooling, the process to be repeated as often as the metal becomes hardened under the

blows. Rods, bars and thick strips can be wrought into handles and bent over the anvil to the desired shape, and where they are to be fastened on with screws or rivets, the ends are beaten flat and shaped with a cold chisel and file. A very attractive surface can be made on flat hinges, etc., by beating them all over with the round end of the hammer.

Sheet metal can be cut in several ways:—by the shears to as thick as 16 gauge; by cold chisels and hammer, laying the sheet on the anvil or end grain of a block of hard wood, like maple or birch, and following the outline of the design, which has been traced on with carbon paper, with the chisel; and with the metal saw. In using the last, small holes must be drilled at all angles to give the saw room to turn. Metal from 20 gauge up to a quarter of an inch in thickness can be easily sawed. The edges are then finished with files and emery paper.

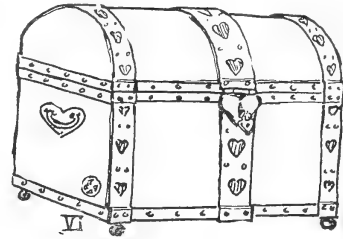
Etching is another method of cutting out metal, and the slightly irregular, beveled edge that is made by the action of the acid is most attractive on some work. I would not advise using metal over 14 gauge as it takes too long. Patience, extreme care and strict attention to details are necessary, though the process itself is not difficult.

The bath is prepared by mixing nitric acid and water in equal parts in a glass or china vessel with a flat bottom large enough to hold the work in hand, or a granite ware baking pan will do, or for very long straps or hinges, a long, shallow box can be made and closely joined and then painted with two or three coats of Asphaltum varnish, which is to be had at a paint shop.

The metal is cut in approximate sizes and thoroughly cleaned by scrubbing with sapolio or hot lye water to remove every trace of grease. It is then dried and warmed and painted

front, back and edges, with asphaltum varnish. When the resist has dried, which it does quickly, take the design cut from stiff paper and lay it on the prepared metal and, holding it firmly in place, trace around it with a sharp steel point, being sure to cut through to the metal in every part.

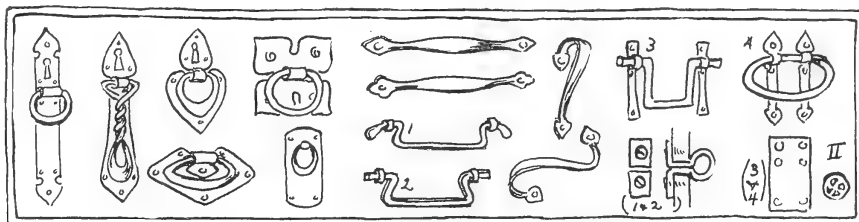
When the metal is in the bath it must be watched very closely at first to be sure the resist covers every spot but the design. This can be seen by the collection of little green bubbles which rise wherever the metal is exposed. In such a case the



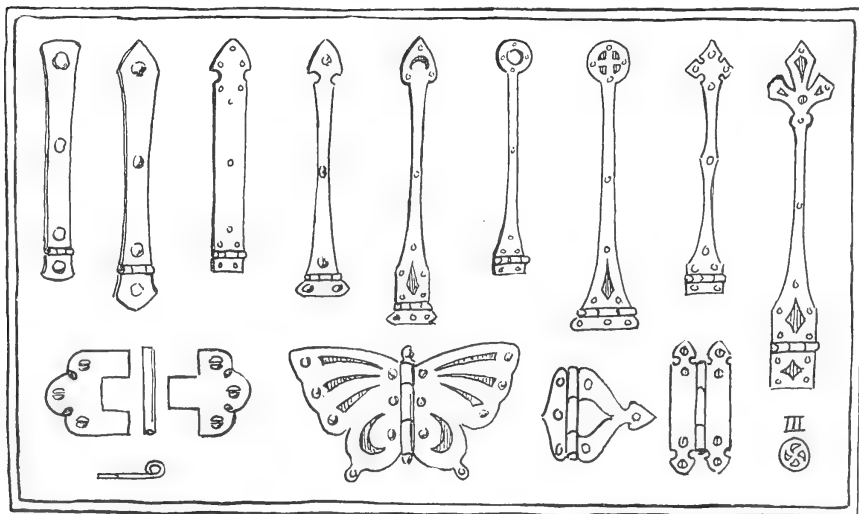
VI.—A box of deep, rich mahogany with pierced bands of polished brass, for jewels or love letters.

metal must be taken out and retouched. If more acid is used, the action is, of course, more rapid but not as even. The bath loses strength as it becomes saturated with the metal and more acid may be added if it works too slow. It takes several days to etch through 14 or 16 gauge. When through, the resist can be scraped off with an old knife and the piece cleaned with coal oil, gasoline, benzine or turpentine.

The diagram in the lower left hand corner of illustration III shows how to cut out hinges. The projecting pieces are beaten



II.—Various styles of handles with diagrams showing method of fastening 1 and 2 and 3 and 4

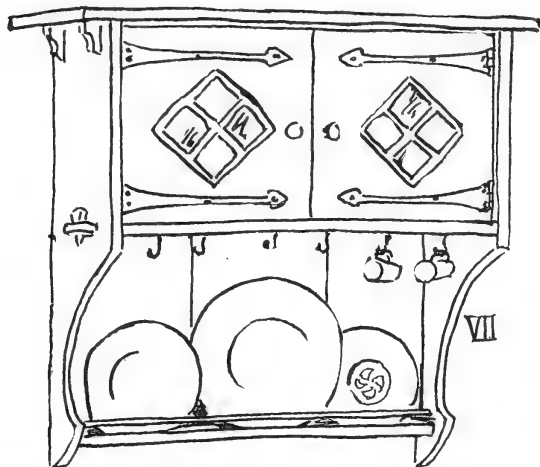


III.—Suggestions for hinges and diagram of construction.

over a rod of the desired size, the ends of which are afterwards slightly flattened so that it will not slip through.

Handles on chests and drawers should have their fastenings go through the wood and a metal plate sunk flush on the inside. If screws are used they are secured by a nut, and nails are cut nearly to the surface and spread by beating.

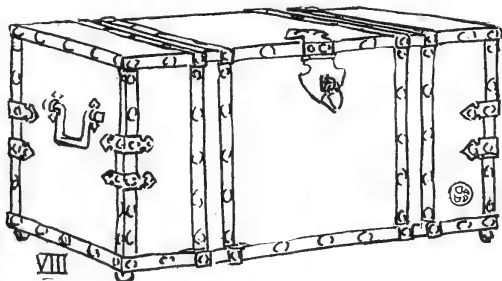
There is a pretty good selection of ornamental nails on the market, including some very nice ones of wrought iron, but the craftsman can make his own by cutting out discs of metal



VII.—Wall cabinet of dull green, wax finished oak with copper trimmings.

the desired size and beating them into shape in a hollow in a hard wood block and then soldering steel nails on to them. Make the surfaces to adjoin perfectly clean, place the head upside down on a hot stove, dip the end of a piece of wire solder in a flux of alcohol saturated with chloride of zinc, then hold the moistened end in the metal cup till a drop melts off, dip the head of the steel nail in the flux, heat it, then place in position in the drop of solder and cool.

When everything is in readiness for the final fastening the metal must be cleaned and finished. Iron work should be warmed and smeared with beeswax and held over a smoky fire, turning every part to the heat. Then cleanse with benzine and rub with emery cloth and put on a final finish of beeswax



VIII.—Chest of red cedar, wax finished, with inch wide bands of iron and flat headed, wrought iron nails.

and turpentine such as I gave directions for in the chapter on Finishing. It should be put on thinly and well rubbed in with an old tooth brush, for instance.

Copper, brass and bronze are cleaned by heating and then putting them in the acid bath a few minutes, or until they look bright. If it is desired to have them remain so, they must be lacquered. Buy a good metal lacquer and follow the directions

for applying. Or they may be slightly rubbed with linseed oil and left to oxidize naturally and gradually acquire the patina of age. Bronze and copper turn brown and brass a dull greenish color. The process may be hastened by heating the pieces on the stove. Copper assumes beautiful iridescent colors by heat, but these gradually darken. There are numerous ways of greening brass, copper and bronze but I would advise the amateur craftsman to buy some of the ready mixed preparations that come for this purpose, as less troublesome and, probably, more satisfactory in the end.



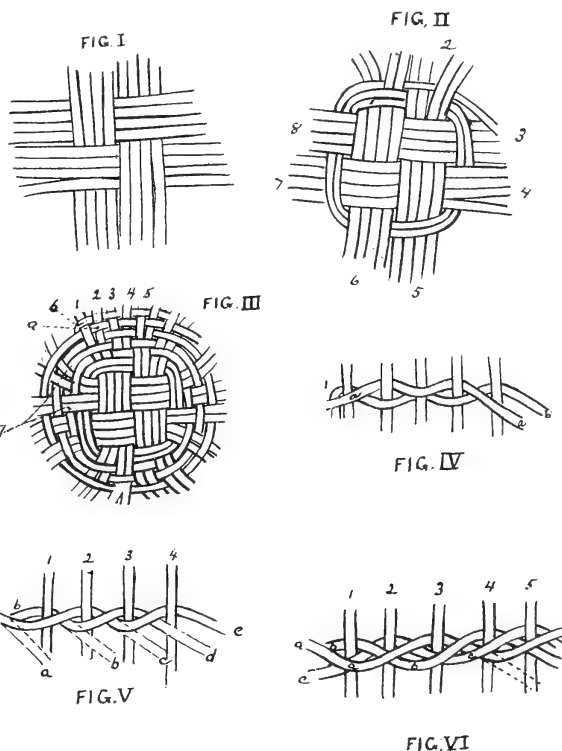
WAYS OF USING TWO WEAVES

Mrs. Hugo Frochlich

THIS construction may be employed in using heavy as well as light material: Spokes of No. 5 rattan and weavers of No. 3 make a strong heavy scrap basket, but for a lighter work basket, 16 spokes, 27 inches long of No. 3 rattan and two weavers of No. 2 rattan, will be best. Lay the spokes, at middle, in groups of four at right angles and weave the groups as in Fig. I. With a pliable No. 2 weaver bind the group at 1 Fig. II, leaving the end underneath as in construction of mat in November number of the KERAMIC STUDIO.

Place the weaver under the next group 2, over 3 Fig. III, continuing under and over each group twice around so as to hold the centre firmly.

On the third round separate and weave under and over groups of two. Continue in this way once around, then pass



the weaver under two groups, as in Fig. III, so as to make the weaver come right in relation to the previous row. Finally separate into single spokes.

Before going farther insert another weaver along the spoke,

at 1 in Fig. III or at 1 in Fig. v, just to the left of weaver *a*. Weave with *a* until it meets *b* then continue with *b* until it in turn meets *a* at 4 Fig. IV. Go on in same way with *a* and continue with *b*. This is the general construction of the basket.

If heavy material be used, weave bottom of basket as large as necessary, then insert one more spoke at the side of each of the other spokes. Pinch each spoke with a pair of pliers at this point of bending. Strengthen the bend by a double or triple twist as in Fig. v.

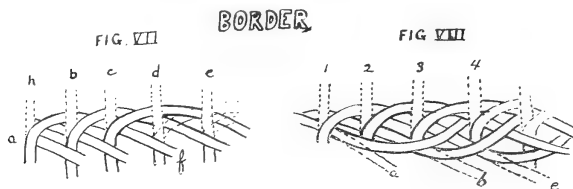
DOUBLE TWIST.

Place *a* in front of spoke 1, over weaver *b*, behind spoke 2, and allow it to rest in direction of the dotted lines *c*. Follow with *b*, in front of spoke 2, over weaver *b*, behind spoke 3 and let it rest in position of dotted lines *d*. Weave then with *b*, place it before spoke 2, over weaver *a*, behind spoke 3 and allow it to rest in direction of dotted lines *d*. Continue with each weaver in same manner.

TRIPLE TWIST.

The triple twist is perhaps better for strengthening than the double. Fig. VI. Place three weavers along consecutive spokes, so as to have weavers all down in direction of dotted lines Fig. v, between the spokes. Begin with the one to the extreme left *a*, in Fig. VI and place it in front of the next two spokes, 1 and 2 at the right, and also the two weavers, *b* and *c*, behind the third No. 3 and down between 3 and 4. Place *b* in front of 2 and 3 and also the weavers, behind 4 and down in front of 5.

This is a very pretty decoration as a border near the top using either in the same material rushes or heavy grasses. Four weavers may be twisted in a similar way by passing the left one over three spokes, behind the next at the right and down in front. Color may be combined with them as parts or whole of the twist.



BORDER.

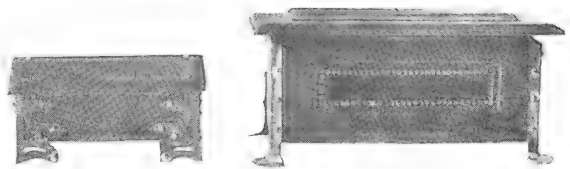
Borders may be same in both large and small baskets. Allow 7 inches of spoke for the border. Place each spoke behind the next two on the right and down in front, between the following two spokes (Fig. VII.) Place *a* behind *b* and *c* and down between *c* and *d* at *f*. Continue with each spoke in the same manner. Fasten the last spoke by pushing it through under *a* and it will come down between *h* and *b*.

SECOND ROUND OF BORDER.

Place each spoke over the next two spokes and the weavers and push it through to other side at left of third spoke. Fig. VIII, *a* is before 2 and 3 and over *b* and *c* and pushed through the opening at left of 4.

Continue with all spokes in this way. The last two spokes require some puzzling over, as they are to be interlocked into the first two to follow the plan. When all are pushed through, cut off with sharp heavy shears or knife. A pair of nippers is very useful here.

Keep the work uniform by placing it above the level of the eye and at a little distance, occasionally turning it slowly. Make any changes in form before going too far.



WOOD, LEATHER AND METAL

Emily F. Peacock

THE boxes made by Mr. G. Brommer are a clever combination of wood, leather and metal. The large box was made of wood $\frac{3}{4}$ of an inch thick. The lid was separate and made of three thicknesses, the bottom part of it fitting well in the box. The whole was stained a rich dull green by applying an olive green stain liberally and rubbing off with a rag. By mixing other colors, a little umber, black, and sometimes red and blue, many different shades can be obtained. When color is satisfactory and thoroughly dry (it should stand for 48 hours at least) rub on beeswax and turpentine and polish with a rag. Polishing with the hand will give a finer texture. Directions for making the beeswax and turpentine were given in the August number, page 97. Pieces of brown leather were cut to fit the panels, and the design put on with a nail set (Fig. 1). The leather was glued neatly in place and gone over



Fig. 1.

with water color, Emerald and Hooker's Green make a good mixture though it is better to try two or three mixtures on a scrap of leather until you find a good shade to go with the wood. The corners and feet were made of one strip of copper; the feet being shaped with a hammer. These strips were fastened on with copper rivets and also colored green. If the copper is perfectly clean a strong solution of salt and vinegar will give a good color. Let this stay on about 12 hours and then very gently rub with a waxed cloth.

The smaller box was made in a similar way, the only difference being that the corners were cut out of a flat piece of brass, fitted to the box and fastened on with small round-headed brass nails.



ANSWERS TO INQUIRIES

J. W.—If you will put a thin wash of Chloride of Antimony over the copper ink stand and slowly heat a little with a blue flame the copper will turn almost black. Rub it down with oil and a little rouge. Pink lights will show through but the atmosphere will soon correct that.

O. M. T.—Twenty gauge copper is a very good weight to use for copper bowls, 12 or 14 gauge would be better for paper knives. Metal used for paper knives should not be annealed, and hard copper should be used rather than the soft.

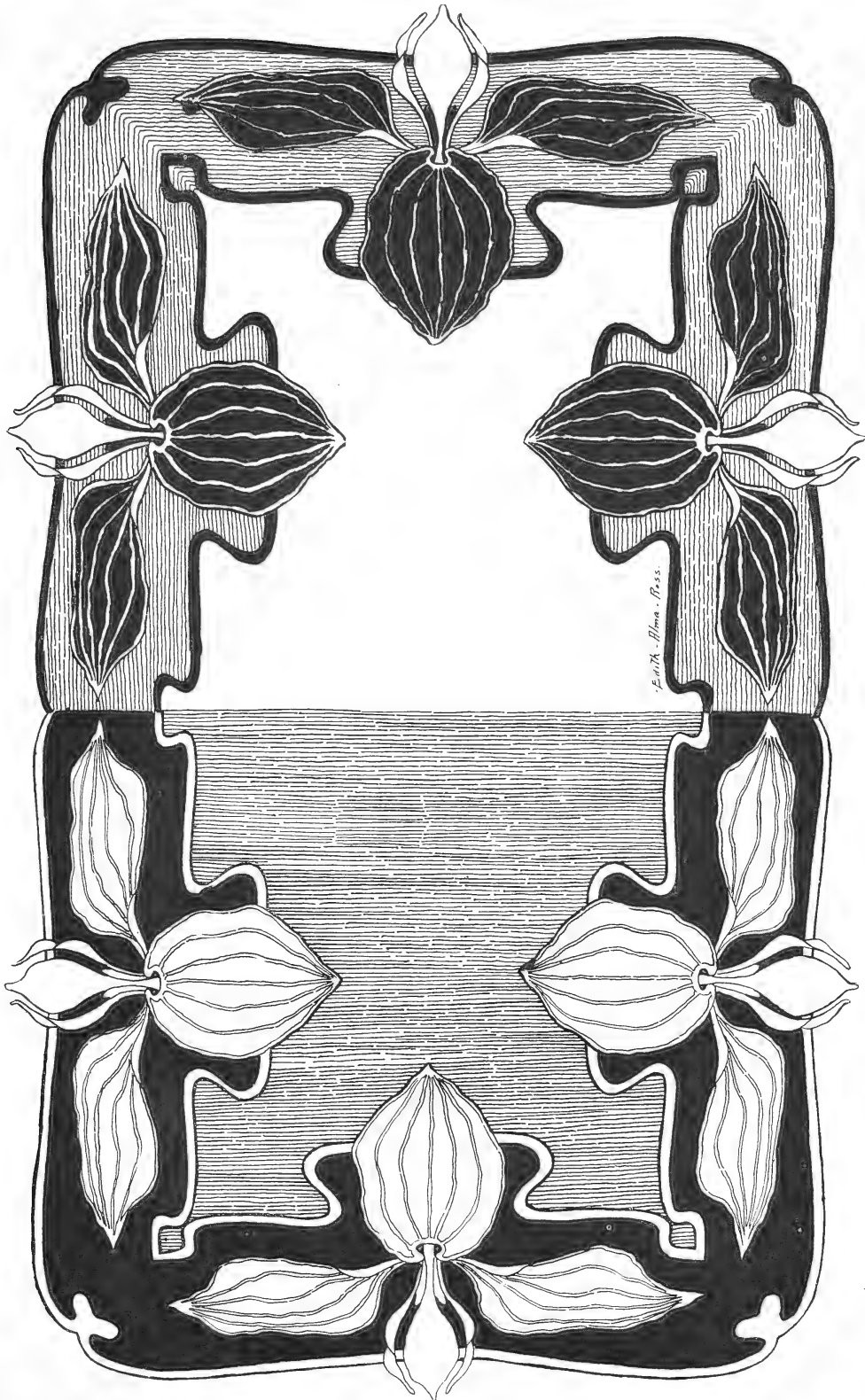
T. K.—An alcohol lamp is the simplest heat for soldering small work, both with hard and soft solder. The lamp and brass blow pipe can be bought for \$1.10.

M. K.—Small lamp or candle shades are made of brass or copper. Use 30 gauge for these and 26 gauge for the large sizes.

Mrs. O. P.—Abalone shells are found on the coast of California. They are beautiful in color, and can be cut with a fine metal saw, and polished with a file. Pieces of the shell set in silver or copper are very effective.

C. A. R.—A bench pin is a wedge of hard wood about 5 by 3, generally beech, fixed in the front of a jeweler's bench and used to hold work up against a file.

TRILLIUM DESIGN FOR TRAY—EDITH ALMA ROSS





OAK LEAVES—MARY BURNETT

THIS design should be carried out in Reds and Browns principally, to give a rich effect, but in the lighter leaves the greens can be used, Moss Green and Brown Green. For

acorns use Finishing Brown, Chestnut Brown and Albert's Yellow. The same colors are used in background, powdering with Brown and Red before thoroughly dry.

PYROGRAPHY

TREATMENT OF TRILLIUM DESIGN FOR TRAY

Emily F. Peacock

TWO suggestions are given. In either one of them, outline the design with very strong careful lines and try to get three tones in the tray, dark, medium and light.

Carve down the background in the borders slightly so that the flower is in low relief. Strengthen the lines again if necessary and burn the background with the flat point. Model the flowers a little with the curved point. Put a dull finish on the tray, by using white shellac and when this is dry rub it down with a very stiff brush.



A useful thing for the housewife is a jam jar. This is the size and shape of a large tumbler, with a plain silver top with a small opening for the long-handled spoon with a shallow bowl which goes with it. A jam jar in china or pottery could be made very effective.



ANSWERS TO CORRESPONDENTS.

M. M.—If your fired green lustre is too dark, the only way to lighten it would be to cover it with a fine diaper of gold or gold and enamel. You can make it lighter before using by adding yellow lustre or a little oil of lavender.

H. C. R.—We do not think lustre advisable to use on a dinner set—it would be appropriate only for desert or some special service. We, personally,

would prefer color and gold. We saw recently a very effective plate in a shrimp pink made probably from a tinting with Pompadour or one of the other iron reds. The design was worked out in this pink, and gold, and outlined with the red of which the pink was made. A dainty border of perhaps $\frac{1}{2}$ to $\frac{3}{4}$ of an inch would be very effective. We prefer the entire set in the same design and color but it is quite permissible and in good taste to have only the service plate and dishes alike and have the plates for the different courses in different designs and color. An initial, crest or monogram on the rim of plate is always in good taste.

D. N. B.—Why do you not try dusting on color for a deep tint. Take English grounding oil and spirits of turpentine half and half, or Miss Osgood's grounding oil which dries more quickly and so avoids dust, thinning with turpentine. Pad this oil lightly, till evenly distributed, then with the palette knife drop some powder color on the surface to be tinted and with a large square shaver or tinter push it over the surface until it has absorbed enough color to look dry, then brush off the balance, be careful that the brush does not come in direct contact with the oil. If this does not come out deep enough, you can repeat the dusting in another fire but usually once is enough. To tint, use as much fat oil of turpentine as color and thin with lavender, with a little practice this ought to make a good tinting without dust. We prefer the large camel's hair blenders to the use of pads. With these the dust can be brushed off as the tint dries. Perhaps a newspaper or oilcloth spread under your work will help avoid dust. Be sure and use enough lavender so that your tint will not be sticky and catch dust.

C. O. M.—We apologize for not answering before, your letter was mislaid. We cannot account for your gold coming out dim and dark where outlined with black while other parts of gold are bright, except that you may be using too much medium which may spread over the gold surface and dull it. Try mixing your powder black with a thin syrup of sugar and water instead of medium and turpentine.

L.—We have used Sartorius cement for mending china and have always had good success with it. Use very little and mix rather thin with water working the pieces close together. We have also found the Dresden Aufsetzweis in tubes very good for mending—thinning with turpentine, tie the pieces together with asbestos cord after cementing.

KEEP THE FIRE ALIVE

KERAMIC STUDIO

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR

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KERAMIC STUDIO

Vol. V, No. 11

SYRACUSE NEW YORK

March 1904



THE Spring Design Competition closes the fifteenth of this month. The new subjects promise to bring forth some interesting work and we trust not to be disappointed. The interest everywhere displayed in designs for childrens' use, is bringing forth good fruit.

We call attention to the treatment of Thorn Apples by Miss Jeanne Stewart, in this number. By mistake the treatment for cherries was put under that study in the February number.

The juries of selection for the St. Louis Exposition meet this month in New York. There is a good note of promise for the Crafts worker in the fact that all works of decorative art—metal and wood work, pottery and china decoration, weaving, etc., etc.,—are to be admitted to the Fine Arts Building along with painting and sculpture, on their artistic merits. Heretofore "Art" has meant painting and sculpture alone—now it includes all decorative and crafts work.

We have, of late, had many inquiries in regard to the buying and decoration of table ware, and many kindred questions. We will try to answer all these queries in a few words, which we trust will be helpful to many of our readers.

As to whether it is better taste and economy for a person of moderate means to buy an entire set alike for her table: A simple, plain set throughout is, of course, always better economy and if well chosen, is in good taste. But a variety in design, well adapted to the shape of the dish and to its use, is a great incentive to appetite and tends greatly to enliven the conversation and make a cheerful feast.

For one of moderate means who can decorate her own china it will be quite as simple a matter to have the designs varied for the different courses as to have them all alike, as far as cost is concerned. If one is buying factory decorated ware, it is of course cheaper to buy the entire set alike in design. However, if we could not decorate our own china or find one of the sets mentioned later, we would prefer a plain white to a decorated set, as the factory decorations as a rule are very inartistic. The plainer the shape, the simpler and more conventional the decoration, the finer the ware in color and translucency—the better the taste displayed. A faint cream tone in porcelain is more agreeable than the bluish tint often seen. If we can decorate our own china a variety in unity is suggested, as for instance, decorate the entire set in blue and white, in red and gold, in blue and green or some one color scheme. Make the service plate, the platters, vegetable dishes and all dishes for entrees or dishes which remain on the table throughout the dinner, with a simple border of strictly abstract motif combined with lines or bands of color, such as the designs shown in the Class Room (KERAMIC STUDIO, August 1903), making a border of $\frac{3}{4}$ to $\frac{1}{4}$ inch wide with a rim and inside line of color. For oyster plates a simple border of conventionalized shells or sea weed—such as the prize design by Miss Peacock, May 1903, K. S. For fish, a conventional fish or wave design similar to the one by Mary Simpson, February 1904, K. S., which received honorable mention. For soup, a design closely convention-

alized on the order of the prize design of Harebell, December 1903, K. S., of some aromatic plant which enters into the make-up of soups—such as bay leaf, parsley, thyme, sweet marjorum, etc., etc. For game, the plate exhibited by Marshal Fry shown in February 1903, K. S., makes a good model, using any game bird in a simple design border. For mushrooms, the motif for conventionalized border suggests itself immediately. For salad, a design made of any of the succulent plants or other ingredients of this greatly varied dish. For the dessert plates, flower designs are always in order and can be more elaborate. For the fruit plates of this course many good conventional designs have been given in K. S. The coffee cups should be decorated to match the main service. The small plates under finger bowls can have any desired motif and on these and the dessert dishes one can give rein to one's fancy.

When one has not the time or means to make such a variety, it would be best, perhaps, to use a few simple geometrical or conventionalized flower designs in the same color scheme on five different sized plates, each of which could be used appropriately for one course or more.

For one who cannot decorate her own china, the Japanese blue and white, the Dresden onion, North or South German, pattern in blue, the Canton or Nankin china or the Willow pattern will be found serviceable and in good taste. The Japanese ware is of course daintiest but breaks easily. The German onion pattern is found on all grades of ware. The Canton is heavy but good in color and wear. Nankin is finer but more costly. The modern Willow pattern also comes on all grades of ware and one must be guided by one's pocket-book.

For breakfast, lunch or tea the blue and white is particularly fresh and attractive and each of these varieties of blue and white has its own claim for preference. The selection will be mainly a matter of choice between the fragile and dainty, the artistic and serviceable.

The question is asked as to what china is appropriate for dinner, *formal* and *informal*. Personally we do not believe in *formal* dinners—"a feast of reason and a flow of souls" should always go hand in hand with that jovial meal—but if one must needs give a funeral feast, gold and white would perhaps be not too gay for the grave nor too grave for the gay.

The question "Is hand painted china for table ware in good taste in large quantities." rouses the craftsman in our soul. Decidedly! Let us have hand-work! The more of it, the better, and the better hand-work, the nearer heaven!

The personal touch at the table where only it often happens we meet our friends, gives the crowning zest to the appetite and the key note to good fellowship.

An afterthought—When we demand hand-work, we mean head-work as well. The mistaken china painter who splashes big flowers all over her plates, to be messed up in gravy and garnished with pickles—or who paints dainty cupids to be drowned in soup, is decidedly absentminded, to speak in mild terms. Anyone who attempts a conventional decoration can not go so very far wrong and practice will make perfect.

And when we use the terms "large quantities" we refer to the amount of decorated china, not the amount of decoration on each piece.



TREATMENT OF RAMBLERS

K. E. Cherry

USE Carnation for first fire—Yellow, Yellow Brown and Brown Green for centres. Second fire: use Rose with deepest shadow in Rose and Blood Red. For foliage use Apple Green, Moss Green, Brown Green and Shading Green. For stems use Brown Green, Violet and Blood Red.



CLUB NOTES

The Providence Ceramic Club opened its Fourth Annual exhibition on the evening of December 9th, continuing two days. The exhibition was a pronounced success and showed a marked advancement over previous years. The members have been studying lustre under a very able teacher and the result was shown in some very fine bits of decoration. The club meets once each month for business and on another afternoon for practical work, drawing from some form of plant life and applying these drawings to some design for china decoration.

The Springfield Ceramic Club held their annual meeting January 12th, the meeting being preceded by a lunch at the Nayasset Club. The retiring president, Mrs. Frederic Goodwin, gave a resumé of the two years existence of the club, concluding with a few suggestions as to the future policy of the organization. The secretary's report showed the present membership to be 19. The following officers were elected to serve one year: President, Miss Ethel L. Valentine; Vice-president, Mrs. H. H. Bosworth; Secretary and Treasurer, Mrs. A. F. H. Pillsbury.



SHOP NOTES

We are in receipt of a handbook of Pyrography issued by F. Weber & Co., Philadelphia. It is full of illustrations and valuable instruction.

We have also received the Mineral Decalcomanie Catalogue of Palm Fechteler & Co., New York, with a large list of transfer designs.



STEIN WITH SMALL BELL-SHAPED FLOWER—ALICE WITTE SLOAN

THIS can be treated in natural colors. Leaves, stems and pods green. The flower yellow, with purple spots near centre, calyx green. Outline in black. Background light brown or light dull blue. Black portions, darker shade of same. Black bands, dark brown, spaces between them and border to be left white. Or else the design could be simply

tinted in pale blue outlined in dark blue. Background pale dull buff. Black spaces, darker shade of same. Bands, dark blue.

In either treatment the dotted portion of background may be put in in an intermediate shade, otherwise in the lighter color used.

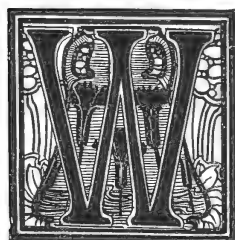


Rambler
Cherry
K. E. Cherry

TREATMENT FOR RAMBLERS—K. E. CHERRY

GRAND FEU CERAMICS

IX—SAGGERS, PLACING AND SETTING

Taxile Doat

When grand feu ceramics, grès or porcelains, are decorated and glazed, they must be set in the kiln for firing. The operation of setting consists in arranging the pieces in the lower room of the kiln, either free or enclosed in protective cases. When they are of grès biscuit, not covered with glaze, they can be fired on top of each other (Fig. 52), provided however that open passages for the flame have been left around them on all sides. During the firing the flames envelop and play upon these pieces, depositing unevenly on their surface a part of the alkalis, potash and soda, which the burning wood produces. These alkali salts do not injure the grès body in the least, on the contrary, they give it the warm reddish brown tone so pleasant to the eye, and the semi-glaze which increases its permanence and density. Moreover, in some cases, in order to accentuate this coloring and glazing, a few pounds of sea salt are thrown into the fire mouths during the firing. The free setting of grès biscuit pieces in the kiln has thus the double advantage of producing this surface quality and making it possible to use the whole capacity of the kiln without losing any room.

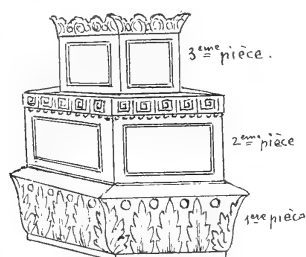


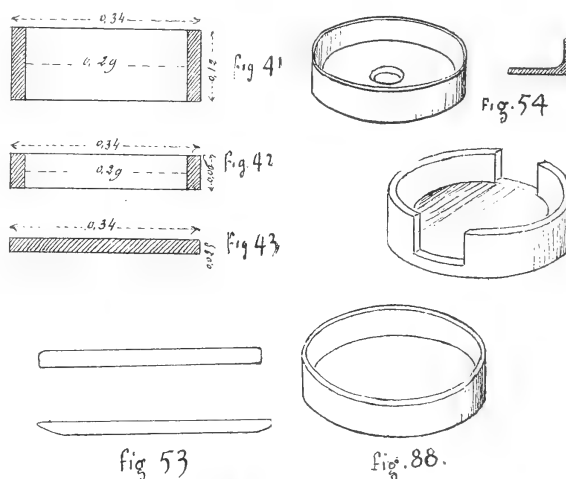
Fig. 52

It is not so with porcelain. The salts from the burning wood, if deposited on the pieces, would give them an unpleasant brownish tone. If the porcelain pieces are decorated and glazed, the effect of the salts is disastrous, causing a series of spots, consequently of flaws. It is therefore necessary to protect all porcelains, during every firing, whether in biscuit or glazed, as well as the glazed grès, and this protection is secured by hermetically enclosing them in fire clay boxes, which are called "saggers." The operation is called placing and is very important, as every thing which has to undergo the high temperatures of firing, must be arranged in the kiln with order and symmetry. The protective pieces are called, according to their shape, *saggers*, *rings* and *bats*.

The saggers are boxes with bottom (Fig. 40, p. 197, Jan. 1904 and 54). The rings, as the name implies, have no bottom (Figs. 41, 42 and 88) and they are used to raise the height of the saggers in accordance with the size of the pieces placed therein. The bats are round plaques or discs, which are placed on the bottom of the saggers to support the ware to be fired. They must be perfectly true to avoid their warping, which would involve that of the piece they support. These bats for bottom saggers (Fig. 53) must be distinguished from the similar pieces which are used for covers (Fig. 43).

The material which is necessary for this careful placing in

saggers is a source of trouble and a continuous expense for ceramists. It must be prepared in great quantities and made into varied shapes, cylindrical or oval, according to the ceramics to be protected. It constitutes the largest expense of all manufacture, large or small, because these utensils for firing must be made with clays of first quality, easy to work and at



the same time infusible. They must be capable of standing repeated firings without softening or cracking, as their softening would cause deformation of the ware, while their cracking will be accompanied with the projection of *grains* of dirt, which may glide over the round surface of vases, but will irreparably adhere to the glaze of plane surfaces, such as plates, plaques, bowls, etc.

The ideal material for this work would be an absolutely refractory clay of high plasticity, making possible repeated passages through the fire. But it is the geologist's work to find such a material for ceramists, and this ideal clay has not yet been found.

The paste to be used for saggers cannot be exclusively made of plastic clay, the drying of which would be too slow and very difficult. It is necessary to shorten the clay with an admixture of grog made from the same paste already fired, pulverised or in grains, according to circumstances. Pulverised for placing material proper, in grains for the making of blocks for the doors and especially for the covers of the fire mouths, also for all utensils in direct contact with the incandescent heat of the fire mouths.

At Sèvres, where all the placing material is given the greatest care, the composition of the paste varies in proportion of grog and clay, according to the use which is to be made of it. Here are the Sèvres formulae:

Outside material in contact with flame

Clay of Provins	30
Clay of Sezanne	20
Grog	50
	100

For inside bats

Clay of Dreux	20
Clay of Retourneloup	15
Crushed sand of Fontaine-bleau	32, 5
Finely powdered grog	32, 5
	100

For cover bats

Clay of Dreux	21
Clay of Retourneloup	21
Very coarse grog	58

100

The clay of Provins is bought at Provins (Seine et Marne) from Mlle. Chevallier-Baillat, 25 francs per 1000 kilos (\$5 a ton); the clay of Sezanne from Madame Vve Parisot, à Sezanne (Marne), 16 francs per 1000 kilos (\$3.20 a ton); the clay of Dreux from Mr. Gasselín-Gigan à Brissard, commune d'Abondant, arrondissement de Dreux (Eure et Loir), 100 francs per 1000 kilos (\$20 a ton), higher than bread. The clay of Retourneloup is bought from Mr. Charles Collet, of Retourneloup, 40 francs per 1000 kilos (\$8 a ton).

After each firing, there is a certain quantity of placing material broken so that it cannot be used any more. The fragments and debris are ground in a mill and if the selection of these fragments has been carefully made, one will obtain grog for each kind of clay mixture, which can be used either as powder or in grains the size of wheat or the size of peas.

These technical details will enable the reader to realize the complication and expense of a careful manufactory like that of Sèvres, and also the impossibility of an ordinary and especially an isolated ceramist adopting this perfection of material.

For my part, having no mill at hand, I use, after many trials and failures, a grog made of all kinds of saggars, which is sold to me by the Ducouroy firm, 50 rue Nationale, Ivry-Port (Seine) for 60 francs per 1000 kilos (\$12 a ton). And the only formula for my placing material is:

Powdered clay of Provins	60
Ducouroy grog	40
	—
	100

At the beginning of my work I had fixed to the ground in a corner of my studio a cast iron plaque with checkered surface, and with a pestle I crushed the sagger fragments to make grog, but it was a slow and painful process which beginners should avoid.

The different phases of the making of saggars are the same as for porcelain, but with less care. Some are cast, others shaped on the wheel.

Before using, the paste must be carefully manipulated by hand and beaten. If the wheel is used, it should not be the same wheel which is used for porcelain so as to avoid any mixing of so different materials. The thickness of the sagger must be the same at every point, but the inner angle should be slightly rounded (Fig. 54). The bats are fashioned in lens

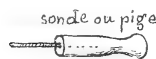


Fig. 55

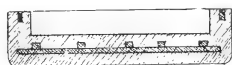


Fig. 56



Fig. 57

shape with a slight depression toward the circumference (Fig. 53). The thickness is tried with a small instrument called a *pricker* (Fig. 55). It consists of a point stuck in a round wood handle 1 inch in diameter.

It is very important to watch the drying of saggars, the edges losing their moisture more quickly than the centre. After being left two or three days in a draft, or subjected to a

very mild heat, as soon as they can be detached from the plaster discs which support them, they must be turned upside down, to avoid the warping of the edges, as the regularity of saggars and rings is the main condition for a good setting of the kiln.

In my own work both saggars and rings are thrown, only bats are cast. This casting is done in plaster moulds which differ from porcelain moulds only by their simplicity and thickness (Fig. 56). They are held by iron braces in their thickness to increase their strength, and on the upper rim to diminish the wear caused by scraping.

After having fashioned a thick plaque of clay well beaten by hand and of the size of the mould, it is pressed in this mould with a pad made of old sponges enclosed in a piece of sheepskin (Fig. 57). This pad fixed to a wooden handle is kept constantly wet. To make the loosening of this disc of soft paste easy the inside of the mould is first sprinkled with sand ground to an impalpable powder.

I insist on the special care necessary for the making of this placing material.

Before being used it must be thoroughly dry, and even have received a beginning of firing. It is then baked at the same time as porcelain pieces are baked, when there is no baking chamber in the kiln, or it is placed in the baking chamber if there is one, during an ordinary firing.

The placing of porcelain constitutes an important operation which requires the greatest amount of attention. It is in no way as simple as the placing of faïences and grès, and is peculiar to the kaolinic clay which must be preserved from contact with the flame. It consists in setting in the kiln the pieces already enclosed in saggars, and no one setting will resemble another; at each firing, everything varies according to the number and especially the size of pieces. To a piece of each size corresponds a certain size sagger, which of course will make necessary a different arrangement of the bungs, unless one executes the same pieces repeatedly or does not make any piece which exceeds certain dimensions determined in advance. But, in any case, the setter will have to employ skillful modifications and unexpected arrangements every time in order not to waste any room, to well balance the pieces, to safely superimpose the saggars with the help of a plumb line, to lute them solidly to each other, and to know from the decoration of pieces what part of the kiln is most suitable for them.

The operation of placing in saggars and setting go together. The placing should be done on a table arranged as close as possible to the door of the kiln. As soon as a piece is placed, the sagger is at once set.

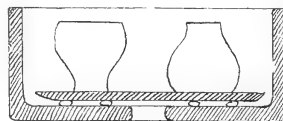


Fig. 58

1st. Placing is easy when the piece is in the shape of unglazed biscuit. In this case it is sufficient to rest it on the fire clay bat (Fig. 58). And to be sure that there will be no adherence between the two, the bat should be covered with a thin coat of infusible wash. This wash is a very refractory powder made of

Pure calcined alumina	50
Washed kaolin	50

2nd. Placing is somewhat complicated when, notwithstanding a broad and solid base, the piece is glazed. The part of the bottom which will rest on the bat should be carefully scraped and brushed to remove any glaze which may have

been left after dipping, atomizing, brushing or any other mode of glazing. Without this precaution the piece and the bat would get stuck and in parting them violently, one would risk losing or at least seriously damaging the piece. As in the first case, and in every case for that matter, the bat should be well washed with the infusible powder.

3rd. Placing requires special care when the piece, whether of narrow or large base, is covered with flowing glazes. Then it should rest some distance from the bat on a small cylindrical column (Fig. 59) resembling a ring about $\frac{3}{4}$ of an inch thick,

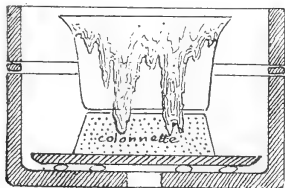


Fig. 59

and the height of which varies according to the more or less flowing tendencies of the glaze. This height will be from $\frac{1}{4}$ of an inch to as much as 2 or $2\frac{1}{2}$ inches. The little columns will receive the excess of glaze. They are thrown on the wheel and it is absolutely necessary to use the same material of which the vase is made, because of the shrinkage which would be different if two different materials were used and might cause the piece to fall from its support. The little column is strongly washed under its base and especially on top on the part which is in contact with the vase.

4th. Placing becomes an art when the piece is of such a shape that the flowing glaze must cover it everywhere as in the case of my vases made from fruit forms (Fig. 60). The

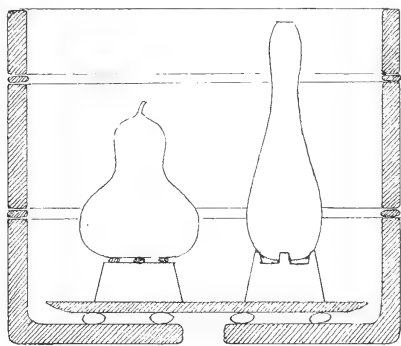


Fig. 60

supporting must be done so that after firing, the vase will be detached without accidents from the excess of glaze in which it is steeped. To do this, I make a bat of the same material and the same diameter as the piece to be fired. This bat is strongly washed, and on the wash, I place at equal distances, 3, 4 or 5 small truncated cones $\frac{3}{8}$ to $\frac{1}{2}$ inch high, the points of

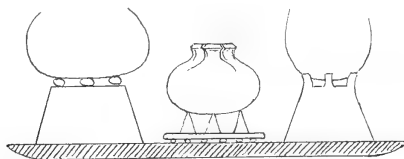


Fig. 61

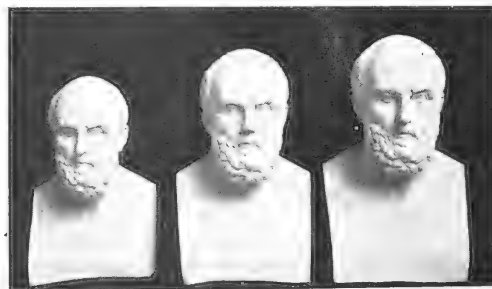
which are washed. On these cones the vase stands (Fig. 61). The glaze flows on to the cones and from the cones to the bat, and the bat having the same shrinkage as the vase there is no displacement of the latter. When taken out of the kiln, it is easy to detach it from the points without any damage.

In the first case there is no loss of pieces; in the second very little is caused by the placing. In the third case losses reach 30%. In the fourth they reach the disastrous proportion of 50%, because the vases being balanced on 3, 4, 5 or 6 small columns, if the least displacement of the bung occurs, the equilibrium is destroyed and the piece falls (Fig. 93). This



Fig. 93—Example of a piece which has fallen during the firing. These three pieces stuck to each other and to the bats, form one mass and can not be parted without breaking them. Every care had been taken in the placing.

easily happens as porcelain shrinks in the proportion of 10% of the natural height (Fig. 62); grès shrinks 12%. To this shrinkage must be added the movement of shrinkage in the placing material and the tendency of the kiln to yield to the pressure of combustion gases. One should understand that in the kiln everything plays, works, moves; and if the setter has not used the plumb line or has not an experienced eye, the rushes of heat from a too rapid firing may act on the piles of saggars so as to shake the vases like a ginger bread house.



Fired

Baked

Raw

Fig. 62

It will be seen that everything contributes to the destruction of the works of bold ceramists, if they do not display in their fight against the fire a good deal of skill and thoughtful patience. But all these precautions will readily occur to the mind of a man who risks in the fire six month of artistic work and all the money coming from former sales.

At Sèvres and elsewhere pieces made from fruit forms are cut off below (Fig. 63) so as to give a broad base and avoid losses. But in my opinion this solving of the difficulty is a mistake, the fruit having its interesting and architectural



fig. 63

beauty in the attachments of the stem. To suppress this attachment by cutting is to destroy the main decorative quality of the fruit. To this method of securing results I prefer the chances of a 50% loss, which allows me to obtain unique and splendid ceramics.

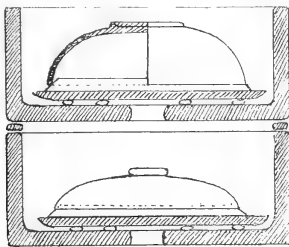


fig. 64

Pieces with large opening such as bowls have a tendency to warp on the edges. To counteract this, the piece is turned upside down and it rests on its large opening (Fig. 64). This will make necessary a second firing for the glazing of the edge which has been left bare in the first firing. In this second firing, the piece having undergone its shrinkage cannot warp any more and will rest on its foot (Fig. 65).

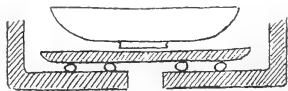


fig. 65.

I insist on the necessity of washing (covering with infusible wash) all the points of contact of pieces with their supports, because a porcelain body, when softening and vitrifying at its highest point of firing, has a tendency to adhere to the support. If the firing is not hard this will not be very noticeable, but if there has been a little too much heat all pieces not sufficiently washed are stuck, and must be detached with blows of a wooden hammer. I have lost some fine pieces for neglecting this detail in the midst of all the other placing precautions.

(To be Continued.)

NEW INDUSTRY FOR THE BLIND

AN interesting experiment in the industrial education of the blind is now being made at Chicago by Mrs. S. S. Frackleton, the well-known originator of the interesting gray and blue ware. She has undertaken the task of teaching the art of the potter to a blind girl resident of the Industrial Home for the Blind, Chicago, and the experiment is being watched with the hope that it will prove so successful as to furnish a new incentive for the industry of the sightless in other institutions.



AT the last meeting of the Advisory Board, the plans were definitely formulated for the receiving of the exhibit for the Liberal Arts Building, and circulars of instruction have accordingly been mailed.

It was voted that the entire exhibit should be sent to New York about April 1st, there to be judged by three judges selected by a committee from the League, who will fill out blanks as in the previous comparative exhibitions. This does not take the place of the work of the Exposition Jury, which will not act until after the exhibit has been installed in St. Louis.

The information concerning the exhibit for the Arts Palace is still delayed.

The travelling comparative exhibition has been returned to New York, and the various pieces distributed to their owners. These exhibitions have called forth many expressions of satisfaction as to their usefulness, notwithstanding the drawbacks which have occurred. Placards giving the markings of the judges were prepared as a valuable adjunct showing in what ways they considered the pieces worthy of study. These, with the drawings, an important part of the exhibition, disappeared in the summer and were found too late to be of service.

One club was disappointed entirely, and another, with considerable expense and trouble, was obliged to arrange for an exhibition twenty-eight days late.

It has been thought well to mention these facts, in order to emphasize the responsibility of all connected with such an enterprise, and how each must give the push to the wheel at exactly the right moment in order to keep the machinery moving.

We learn that a number of clubs have taken up courses of study under competent leaders—a significant fact.

The tri-ennial election will take place in May, when another mile stone will be passed in the journeyings of the League toward a higher plane of excellence.

We would like to call the attention of the clubs to this election, that they may be considering nominations.

IDA A. JOHNSON,
President.

LIMOGES PORCELAIN

THE past year has been one of the most successful in the history of the ceramic art in Limoges. The disposition of the output remains practically the same, viz, five-sixths is exported to the United States. All shapes, designs, and decorations are gotten up for the market of the United States; every fluctuation or change in that country are carefully noted and felt.

There is a gradual change taking place in the styles of decorations—decalcomania, which superseded hand painting as a cheap method of decorating some years ago, is yielding by degrees to higher and more artistic styles; soft underglaze colors are so applied as to produce fine effects.

Every year shows that Limoges is more and more dependent upon the American trade, and if American porcelain factories were able to supply the domestic trade it is certain that the kilns of Limoges would remain unfired.



BARBERRY DESIGN FOR PLATE—ELIZABETH HALL

This design is to be carried out in blue and green, use Banding Blue and Black with a touch of Ruby Purple for the Blue and for the green Moss or Royal Green. The design can also be treated in Copenhagen Blue and Grey.



TABLEWARE—MAUD MASON

SOME TABLEWARE DECORATIONS

THESE photographs of tableware exhibited by Miss Maud Mason, were received too late for publication with the article on the exhibit of the New York Ceramic Society. Although interesting in design, the chief beauty lies in the color which can not easily be described. Of the three plates selected as most representative from a goodly number, the design of orange trees was perhaps the most attractive—carried



MISS MAUD MASON

out in rich orange, blue and green. The centre plate and bowl were in grey blue, the other plate in greyed tones of blue, orange and green which were exceedingly effective. The stein was carried out in blue greys and the claret pitcher in olive tones, the lemons being yellow with an olive tinge. It was unusually complete in design and color.

TREATMENT FOR PLATE IN THORN APPLES

(See design in February K. S. called "Cherries" by mistake.)

Jeanne M. Stewart

THE colors used in the bright little berries are the same as in currants, namely Dresden Yellow, Red, Pompadour No. 23 and Stewart's Pompadour with which a little Ruby Purple has been mixed. In some of the upper berries which are not quite ripe, Lemon Yellow and Yellow Green may be used. The leaves of the thorn apple may be very vivid in coloring at time the fruit is ripe. One or two of those most prominent are laid in with Lemon Yellow, Yellow Brown, Brown Green, Pompadour and Chestnut Brown, the Yellow predominating.

A touch of Yellow Red at the tip will give more brilliancy. More of the green tones may be used in the remaining leaves.

A pretty harmony may be obtained by keeping the background in Yellows and Browns. Ivory Yellow, Yellow Brown and Chestnut Brown may be used. In the third painting the darkest parts of the background may be powdered with same colors as used in painting, throwing parts of the design under the color, giving an underglaze effect.



STUDIO NOTES

Mrs. Sara Wood Safford of New York has returned from Florida where she has been making studies of flowers and fruits as a rest from the routine of class work.

Miss Jeanne M. Stewart of Chicago leaves for Europe the first of May for a year of study abroad.

Mrs. Katherine Cherry of St. Louis intends to spend the rest of the winter in California making water color studies of flowers and fruit. We expect to give a number of her clever drawings in KERAMIC STUDIO.

Miss L. M. Smith and Miss Jessie Berryman have opened a studio at 423 Boylston Street, Boston.



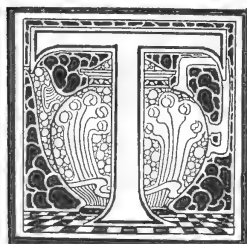
BARBERRIES—LENA HORLOCKER

Treatment on page 262.



AMERICAN CLAYS FOR PORCELAINS AND KILN USE

Charles F. Binns



THE articles by M. Taxile Doat now appearing in these pages are of the highest importance to every one interested in the progress of the ceramic art. Coming, as they do, from the pen of one who has himself performed those things whereof he writes, they constitute the most important pronouncement upon the production of hard porcelain which has appeared in the English language. Any one who has seen and handled M. Doat's dainty creations cannot but feel a glow of gratitude towards him for having with the utmost generosity laid bare his art to the brotherhood.

It is with the view of making the work of the famous Frenchman more useful to his American readers that these lines are penned, for it is very evident that clays and pastes cannot profitably be imported by those who desire to take advantage of the information given in the articles. Nor is there need of this for our own land contains clays as fine as any in the world and in the school over which the writer presides beautiful porcelains have been made from purely native materials.

Instructions for mixing and preparing body clay have already been given in the articles on "Clay in the Studio" and need not be repeated here. The procedure is the same except that porcelain clays containing no ball clay are very short and must be aged and well worked to develop plasticity. Fortunately however, we in America are placed under a considerable advantage in the possession of our Florida clay. This clay, while in reality a ball clay, having been washed away from the site where it was formed, is virtually a kaolin with a high plasticity. This clay may be obtained by the barrel from the Golding Sons Co., Trenton, New Jersey, or East Liverpool, Ohio, it is called simply Florida clay.

The following kaolins are suitable for use in porcelain bodies:

Harris Kaolin, the Harris Clay Co., Dillsboro, N. C.

Georgia China Clay, I. Mandle, Clay Merchant, St. Louis, Mo.

Delaware Kaolin, the Golding Sons Co., Trenton, N. J., and East Liverpool, Ohio.

Ground flint and feldspar may be obtained from the:

Illinois Mineral Milling Co., East St. Louis, Illinois.

The Golding Sons Co., or the Eureka Flint and Spar Co., Trenton, N. J.

The chief difficulty which will be met with in these last named materials is that they are rarely found, in commerce, ground fine enough for use in porcelain. Hence it is important that the maker of porcelain should instal some kind of grinding machinery.

Porcelain is an exotic in this country and the pastes cannot be bought ready prepared as they can in France, moreover, the making of porcelain is an art of extreme difficulty and half the battle is in starting right. One who is unable to undertake a reasonable outlay at the beginning has but small prospect of success and it is best therefore to carefully count the cost.

Porcelain can be made at temperatures ranging from cone 9 upwards, cone 13 being as high as one has ever need to reach. The limit is not in the body composition but in the glaze. Translucent white wares can be made as low as cone 4 but the true porcelain glaze is one without lead or boracic acid and this cannot be produced, in the present condition of the art, below

the temperature named. The mixture for a porcelain body to mature at cone 13 will be somewhat as follows:

Harris Kaolin	25
Georgia Kaolin	20
Florida Clay	15
Flint	25
Feldspar	15

and for lower fires the feldspar must be increased and the kaolin lowered.

The two kaolins are not absolutely necessary, but better results are to be obtained by using both than by either one alone.

A porcelain glaze for cone 13 will be the following:

Feldspar	25
Whiting	11
Kaolin	19
Flint	45

For lower fires the kaolin and flint should be reduced.

Success in porcelain making depends, as will be gathered from M. Doat's articles, upon the proper proportion and use of saggars and other placing material such as rings, bats and props. No cheap clay will do for these, for the stress of the fire falls upon them and if they fail the whole of the labor will be lost. Many highly refractory sagger clays exist in the country, some of these are in use as glass pot clays and, while too expensive for factory use, may well find a place in the studio. Some of these clays are mined in a hard rocky form and must be purchased in ground condition or they will be useless. The following list of merchants and their products comprises all that will be necessary:

The Warrenite Co., St. Louis, Mo., ground Warrenite.

The Christy Fire Clay Co., St. Louis, Mo., ground glass pot clay.

W. H. Cutter, Woodbridge, N. J., sagger clay.

I. Mandle, St. Louis, Mo., Tennessee ball clay No. 1.

The Golding Sons Co., Trenton, N. J., Florida clay.

The Christy clay and Warrenite are not suitable for use alone, but are most valuable in mixtures; some plastic clay is necessary to combine with them. Tennessee ball clay is the most plastic in the list but not refractory enough for use alone. Florida clay is both plastic and refractory but expensive.

An important factor in the blending of sagger clays is "grog." This is the name given to any burned clay which is crushed and added to the mixture. The object of this is twofold, it helps to diminish shrinkage and thus to keep the forms true and it adds to the porosity of the pieces and permits the passage of kiln gases, thus making the fire more effectual. The preparation of grog is important. At first it must be made of pure calcined clay. After one or two burns the supply of broken bats and saggars is more than sufficient to supply grog.

In making grog for a beginning, the fragments of clay should be reduced to the proper size before burning as the dust can be used in mixing and there is no waste. Two sizes will be needed; for saggars the grog should range from the size of ground coffee to that of split peas, for bats and supports from the size of ground coffee to that of mustard seeds. A coffee mill is, by the way, an excellent tool for grinding the smaller sizes and an adjustable mill can sometimes be set wide enough for even the split pea size. Three sieves are necessary, having respectively eight, fourteen and twenty meshes to the linear inch. These can be made to lock together, the coarse one at the top, so that the whole sifting is but one operation. The crushed clay is placed on the coarse sieve, that which will not pass is re-crushed, that which lies upon the second is used for saggars, and that upon the third for bats and props. The dust passing through the third sieve is returned to the clay box for

use as clay. The two sizes of clay grains are now collected, placed in jars and burned at as high a temperature as may be available. The jars must of course be made of a good refractory clay. Such jars or crucibles are always useful and if, when practising at the wheel, a dozen or two of these be made as trials, they will prove a great satisfaction, they can be used many times.

In using sagger fragments for grog the same process is gone through except that the burned clay is harder to crush. In this case the dust is useful for various purposes. It can be mixed with the clay for lutes or can be worked up with a little plastic clay to use as stopping for cracks in the kiln. Of course the sagger clay itself can be used for wads but wad clay is needed at every burn while sagger clay, when once the supply of sagger is made up, may not be required for some time.

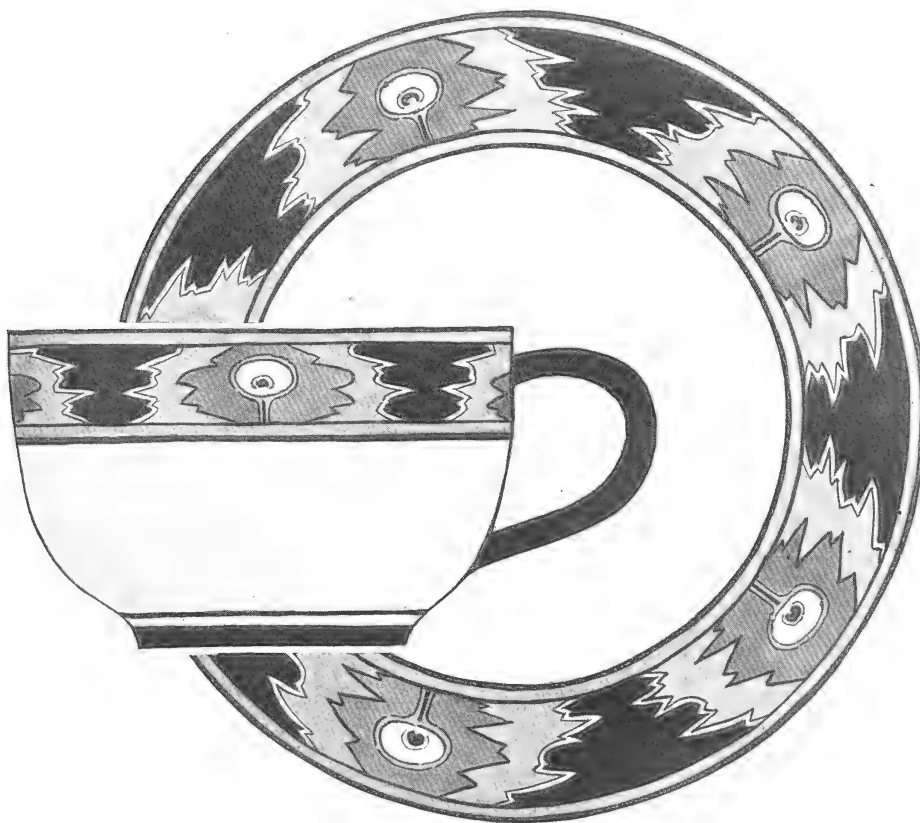
For sagger the following mixture will be found good:

Ground Warrenite	2	parts by measure
Coarse grog	2	" "
Tennessee ball clay	1	" "
	or	
Ground Christy clay	1	" "
Tennessee ball clay	1	" "
Coarse grog	2	" "

For bats the same mixtures will answer but fine grog

should be used. And for lutes or wads the grog is replaced by sagger dust. These mixtures cannot well be made as slips in the manner recommended for bodies because the grog would settle out. The best way is to mix thoroughly in the dry state and then to form the clay batch into a ring like the banks of a pool. Fill the pool with water and allow it gradually to soak into the sides. The clay can thus be worked up into a plastic mass without loss and with the minimum of "muss."

Sagger making is not easy. It demands considerable strength and skill but of course it is not impracticable even in the studio. M. Doat says the sagger may be thrown upon the wheel. The objection to this is the coarse grog which would cut the hands badly. In practise they are made by rolling a sheet of clay around a wooden drum of the right size. Care must be taken, however, to see that they are straight and true. For this they should be set on the wheel and turned with a steel tool. Bats may be either beaten out and cut or pressed into plaster molds. These are of course burned before use. Not so the porcelain bats upon which delicate pieces are set. The essence of these is that they shall contract with and at the same rate as the porcelain itself, hence they are made of the same clay and used before burning. Soiled scraps of porcelain clay should be set aside for this purpose. The stains and spots of impurities will not affect the shrinkage and good clay will be saved.



DANDELION DESIGN FOR CUP AND SAUCER—HARRIET B. HURD

THREE tones of grey blue on the white china, with dark blue outlines, or treat the design in gold, using Roman Gold in darkest part with a powdering of black dots. Light

Green Gold on part back of flower. Leaves left white, also flower; narrow bands Roman Gold; all outlines Black. A tint of Ivory lustre might be placed all over the china as a background.



DESIGN FOR PLATE—MRS. DANTE C. BABBITT

OUTLINE the design in black (equal parts Ivory Black and Dark Blue). The bands are green, Apple Green, Mixing Yellow, little Brown Green and $\frac{1}{2}$ Aufsetzweis. The leaves are also of this, the flowers are blue, Deep Blue, Deep Purple,

touch of Black and for the second fire $\frac{1}{2}$ Aufsetzweis. With the latter use turpentine only. Centres of flowers are yellow, little circles green. For the background of border use the blue mixture very delicately, giving almost a blue gray effect.



SILENE STELLATA—EDITH ALMA ROSS

Commonly called "Starry Campion" or "White Catchfly." Flowers white, foliage greyish green.



TRAILING ARBUTUS OR MAY FLOWER IN WATER COLOR—MAUD BRIGGS KNOWLTON

TRAILING ARBUTUS OR MAY FLOWER IN
WATER COLOR

Maud Briggs Knowlton

THIS little spring flower grows very close to the earth, and blossoms about the first or middle of April in the New England States, putting forth its beautiful pink and white blossoms after the first warm April rains.

The flowers should be painted in the centre with a delicate wash of Lemon Yellow and Emerald Green.

It would be well to paint the most important bunch of blossoms in white, leaving the paper for high light, and making tender grey shadows of Rose Madder and Emerald Green. Those bunches of flowers which are painted in pink, should be done with Rose Madder used delicately, while in some clusters a thin wash of Vermilion may be used.

For shadows of pink flowers use Rose Madder with a little Cobalt. Centres of pink flowers are same as white. The very heart of the flower is a beautiful green made of Aureolin and a

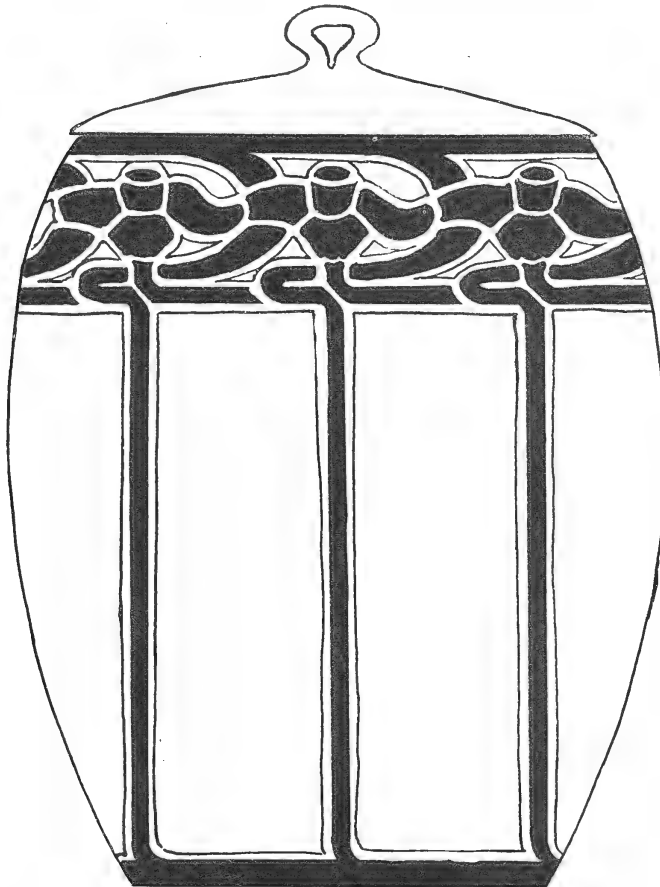
touch of Antwerp Blue. Care should be taken not to get it too dark.



KAOLIN DEPOSITS

EXTENSIVE deposits of kaolin of a superior quality have recently been discovered in Western Kentucky by a company prospecting for lead. The samples that have been tested by experts are pronounced to be the finest yet discovered in this country. There is an unlimited supply, and practically all is free from foreign matter of any description. A company has been formed in Owensboro, Ky., to develop the deposits and they hope to have them on the market in the near future. All the lands have been leased or purchased, and besides kaolin there is an unlimited supply of fire clay, standing tests up to 4000°F.

W. F. Keates of Lisbon, Ohio, has the management of the Company. Samples may be had by writing him at Owensboro, Ky.—*China, Glass and Pottery Review*

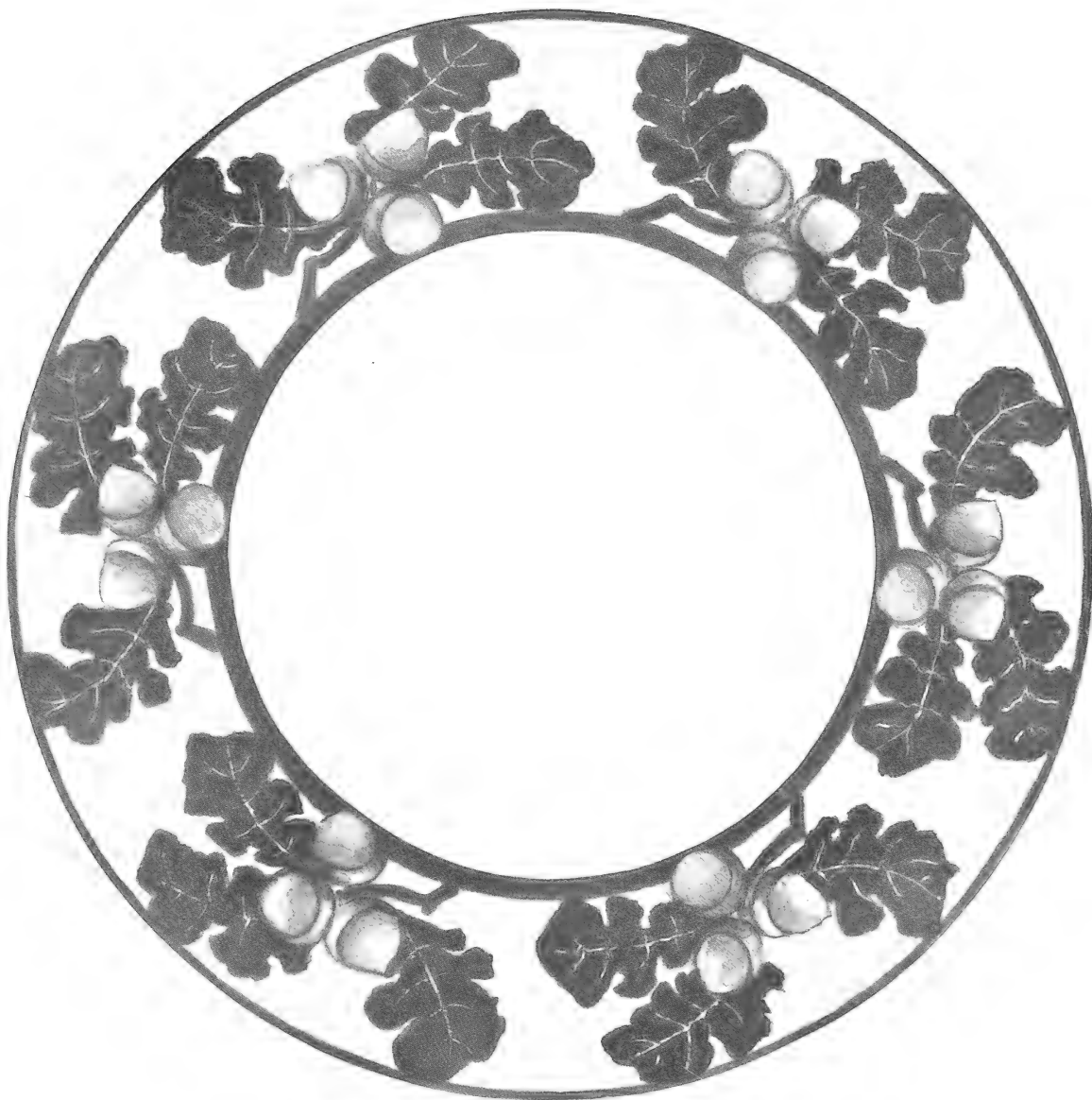


DAFFODIL DESIGN FOR CRACKER JAR—MISS AUSTIN ROSSER

THE design may be laid in a flat tone of soft greyish green without outline. After firing ground lay the entire surface of china with green glaze with which a little black has

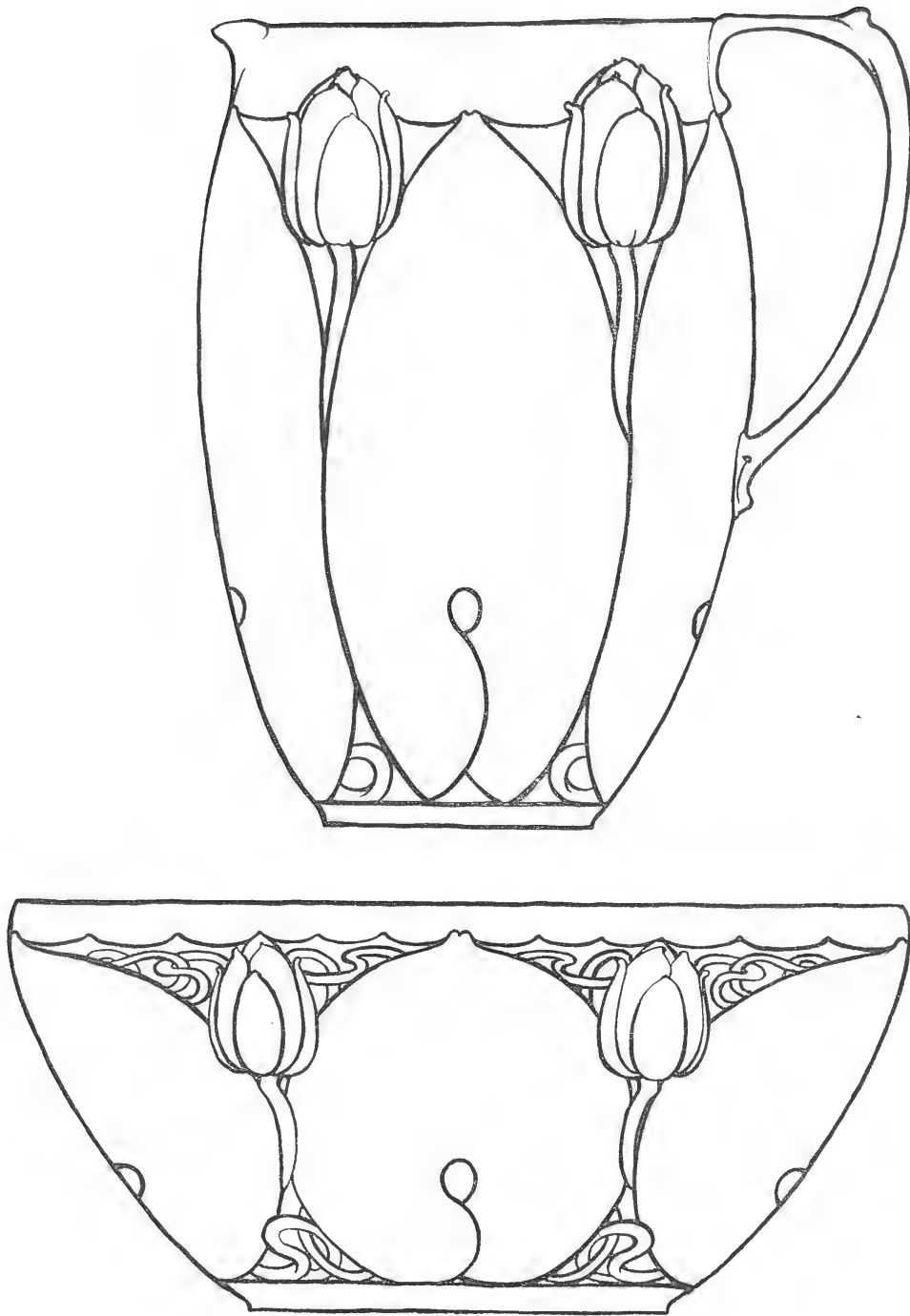
been thoroughly mixed—just enough to soften the tone.

The strong contrast shown in the pen and ink drawing should be avoided in this or any monochrome treatment.



DESIGN FOR PLATE—EDITH H. LOUCKS

Ground of border a dark blue, using Banding Blue with a touch of Ruby Purple; leaves and stems a dark royal green; acorns, Pompadour Red with a little yellow Brown, not too dark; acorn cups, Yellow Brown.



BOWL AND PITCHER—ARTHUR KIDD

This design is especially suitable to a wash bowl and pitcher. A good color scheme would be: leaves and stems grey-green or yellow brown or green lustre, buds and ground white, outlines gold.

THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

Under the management of Miss Emily Peacock, 6 Brevoort Place, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

BASKETRY—KNOT STITCH

Ava M. Froehlich

THE knot stitch is also known as the lace or knit stitch. It is in reality a coil bound by the material giving the effect of a knotted lace, knit or crochet work.

Many different materials may be used as a foundation for this effective stitch, much depending upon the size and shape of the basket.

Round reed of any size may be used. A very small reed worked with a fine strand of raffia makes a closely woven basket of beautiful texture. But it will require time and patience.

Half round reed, sweet grass, soft coils of any size, such as imperfect grasses, second quality raffia, corn husk, jute roping, heavy twine, are, when firmly worked, very well adapted to these coil stitches.

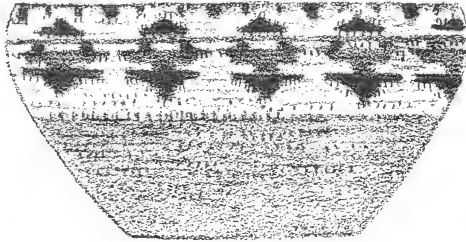


Fig. I

PLAN

Plan the shape and the decoration of the basket as in Fig. I. Decide how many units are to appear as a design. Lay out the top view of the basket by dividing the circle into as many parts as there are units similar to Fig. II. Compare the plan frequently with the work and where the color is to appear, splice the raffia as explained in Lazy Squaw stitch, *KERAMIC STUDIO* for December 1903.

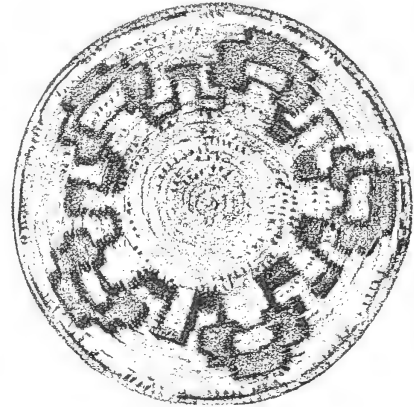


Fig. II

Start coil as in Lazy Squaw stitch and begin the knot after binding the centre firmly as in Fig. III.

This is one of two ways of making the lace stitch:

Wind the rattan *b* with raffia *a* for the space of one quarter of an inch toward the right. Bring the needle through from the back, catching under the preceeding row to bind the new coil to the last one. Throw the raffia over the new coil and then bring it forward underneath at the right of the binding stitch. Place it in front of this stitch and through to the back at the left of it. This completes the knot and we are ready to wind the coil for a quarter of an inch and proceed as before, keeping the stitches as even as possible (Fig. IV.)

Many will prefer working toward the left. The order of procedure is then reversed.

Wind the raffia over the coil toward the left (Fig. V.) Loop the raffia over the new coil, after catching the binding stitch into the last coil, bring it underneath this coil forward at the left, over the stitch in front, through to the back at the right of it.

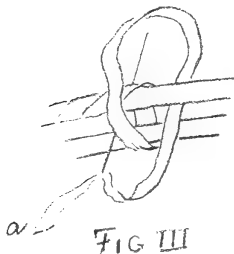


FIG III

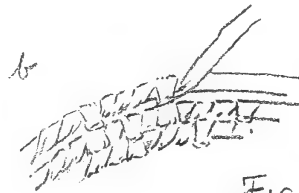


FIG IV

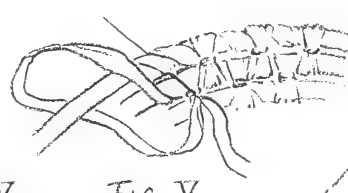


FIG V

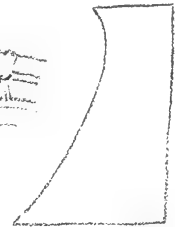


FIG VI

Use few colors. Two colors combined with the natural raffia, such as two shades of brown, or brown and orange, or black and red, will be more effective than the use of more colors.

MATERIAL FOR KNOT STITCH BASKET SIX INCHES IN DIAMETER.

Rattan reeds, No. 3. Needle large enough to hold half of one strand of raffia, and best quality of raffia.

Wind coil as before and continue.

When the design is to appear, count the stitches in the last row and begin the design at regular intervals, allowing a little for irregularities in the raffia, keeping as close to the plan as possible. Change where the plan will not fit the number of stitches.

A profile as in Fig. VI cut from stiff paper is an excellent guide in keeping the shape.

A FEW SIMPLE DYES

Brown.—Boil Walnut bark or root until the dye is strong enough. Set color with strong alum water, either allowing it to soak in the alum solution before dyeing or immerse after taking out of the dye. Rinse thoroughly in any case.

Orange.—Diamond dyes used with care give good results, in many cases. They have their own mordant.

Annatto.—Annatto yields strong rich orange. Set in alum solution an ounce of alum to one gallon of water.

Black.—Logwood one ounce, a piece of Copperas half the size of an egg. Two gallons of water. Boil until dye is dis-

solved. Strain, and allow the raffia to remain in dye until a good rich black is obtained.

Reds are produced easily by the use of Diamond dyes. Many different shades may be obtained by experimenting with the Light Red, Vermillion and Deep Red, used either in combination or alone.

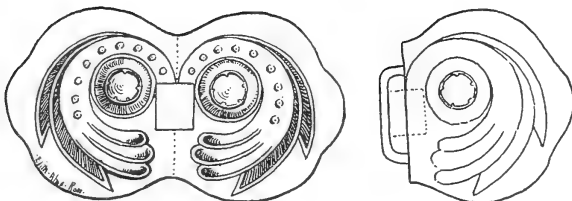
Cochineal is a good red. Use as a mordant for it, four parts of cream of tartar and six parts of Stannous Chloride. Indigo is the dark blue, and combined with fustic makes a bluish green.

All dyes should boil very slowly.

Materials must be left in the dye until the required shade is obtained. Then set in alum water and rinse thoroughly.



DESIGN FOR MIRROR—FREDERICK G. WILSON



Design for Silver Clasp, enameled or hammered, and set with jade or amethyst, by Edith A. Ross.

DESIGN TREATMENT FOR MIRROR

Katherin Livermore

IN outlining this, be very careful to keep on the outside of the drawing lines, otherwise the delicate petals will be obliterated.

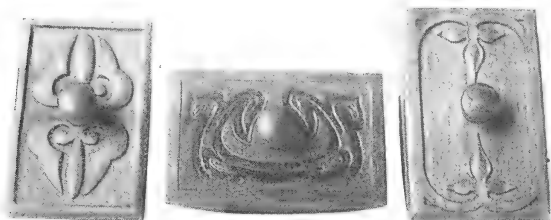
The wavy background lines are simply outlines made strong and very close together.

Put a light wash of gamboge over the flowers and sap green over the leaves and stems; shade leaves with olive green, the flowers very delicately with brown madder strengthening the yellow in places. Wash in a little green towards the center.

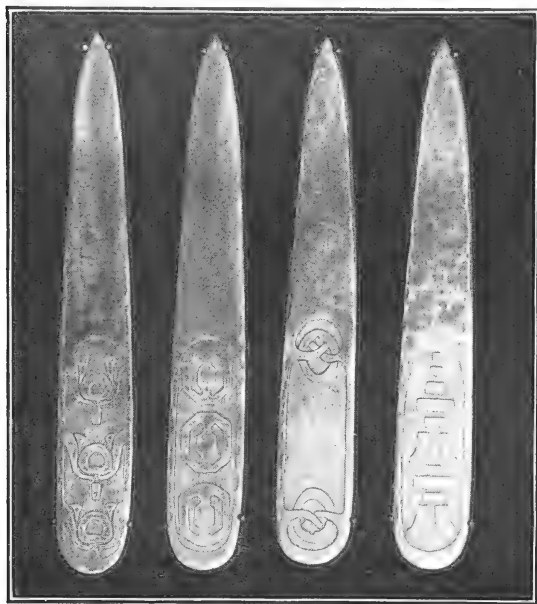
BLOTTING PADS.

Emily F. Peacock

THE blotting pads by Miss Place and Miss Johnson, of Pratt Institute, are good examples of simple wood carving. Both sides of the pads were left perfectly plain and all the wood part finished in the natural color.



For the centre blotting pad a piece of dark brown leather was tooled in low relief and glued neatly into the space cut out for it in the top piece of pad. The wood part was stained a dark brown, and given a dull finish.



FOUR PAPER KNIVES

Emily F. Peacock

MAKE the paper knives in copper or brass as described in the July number. Then put the hammer marks in with a round faced hammer. Paint in the design and etch the background slightly. Color with Chloride of Antimony and when this is dry rub gently with a little rouge and oil.

❖ ❖
NOTES

"The Gotham Shop of Arts and Crafts" is the quaint sign of a new firm of crafts workers lately started in Denver, Col. by two young women from Pratt Institute, Brooklyn, Miss Genevieve Butler and Miss Mabel Munson, together with

Harold C. Butler. They will have in the shop all sorts of crafts work and carry on as well the business of interior decorating.

The Guild of Arts and Crafts will hold its spring exhibition at 109 East 23rd street, March 22d to March 26th. All exhibits must be received by March 20th.



COPPER COFFEE POT

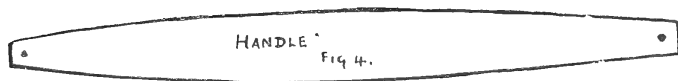
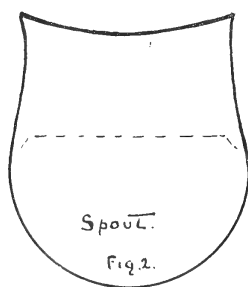
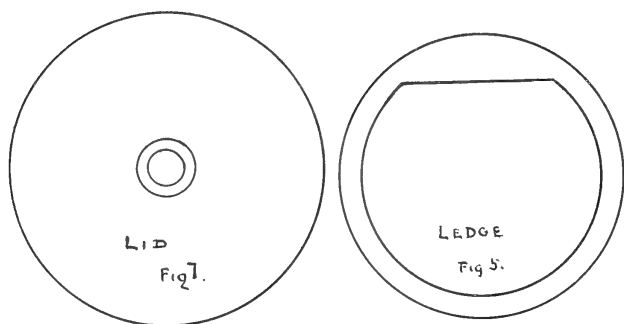
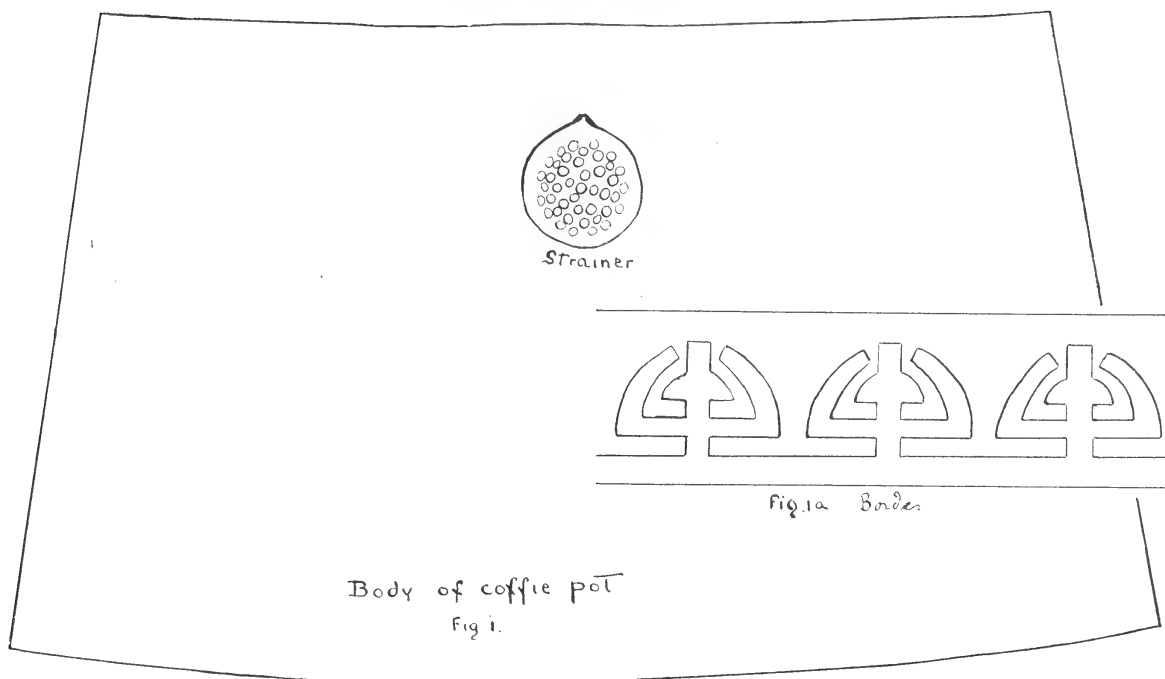
Emily F. Peacock

THE quaint little copper coffee pot was adapted from one surely made by an Oriental. Use Gauge 22 for the body part and Gauge 18 for the handle and small pieces connecting the handle with the coffee pot. First cut out the body of pot (Fig. 1), and solder the two straight edges together from the inside. This seam comes in the back of the coffee pot. Trace on the design Fig. 1a, and mark it in with a steel point, fill the cylinder shape with cement and put it on the pitch ball.

Chase the design with a broad tracer, turning the cylinder on the pitch bed as each part of the design is finished. In the front part of the coffee pot drill the holes for the strainer as indicated. Cut out the spout, and solder the two edges together down to the dotted line (Fig. 2). Shape the bottom part of the spout by beating it on a block of wood slightly hollow. When in proper shape, fit it over the centre where the holes are drilled, and solder the spout in place. Cut a disc of copper for the bottom of the coffee pot, so that it fits very well just about $\frac{1}{8}$ of an inch from the bottom, solder this in. The ledge for the lid (Fig. 5) is also a disc with the centre cut out. Fit and solder this into the coffee pot about half an inch from the top. Then the lid (Fig. 7) is fitted on the ledge, and a large flat headed rivet, filed into shape and soldered on head down, makes a good knob (Fig. 6).

The small pieces that connect the handle with the coffee pot (Fig. 3) are cut and shaped, then soldered on the front and back of the coffee pot, the handle (Fig. 4) being riveted to these.

The coffee pot must be silver plated or tinned inside before it is used.



ANSWERS TO INQUIRIES

**—A nail set is a solid steel punch with a slight hollow in the end. See Fig. 1, page 236, February number. When the nail set is used on metal for leather it makes a circle slightly raised in the centre.

We will give a design for a silver sugar bowl and cream jug later.

Jeanette.—In the answers to inquiries from A. U. Z. you will find information you ask for.

The tools for tooled leather are made in the same way as those for metal work. To begin with you should have a chasing hammer, a straight tracer, and a curved one. Then it depends on the nature of your work and the design, what other tools you need.

T. W. A very good green color for copper is made by mixing the following:

Amonium Chlorid	31½ Grammes.
Copper Nitrate	31½ "
Calcium Chloride	31½ "
Distilled water	85.2 Cubic Centimeters.

Put this on with a swab, and let it stand several hours, then gently rub with a waxed cloth.

A. U. Z.—1. Semi-precious stones (unmounted) such as cats eyes, moonstones, amethysts, chrysolites, opal and turquoise matrix, can be purchased from Max Nathan, 45 Maiden Lane, New York City.

2. Metal tools of all kinds are kept by F. W. Gesswein, 39 John St., New York City. If you can get square bars of annealed steel in Hawera you could make your own tools. See January number. Sheet copper and brass is sold by most large dealers in hardware. Patterson Bros., 27 Park Row, New York keep an extensive stock. The higher the gauge the thinner the metal, 20 and 22 gauge are good numbers for repousse work. Sheet silver can be bought from C. S. Platt, 29 and 31 Gold Street, New York. Now it is 60c. per oz.

You can make the cement for repousse from recipe in June number, 1903.

3. A No. 4 enameling furnace made by the Buffalo Dental Manufacturing Co., Buffalo, N. Y., price \$35.00 is a very reliable one. The fire clay muffle is four inches high, four and a half in width and five and a half long.

4. Silver-work and Jewelry by H. Wilson, edited by W. R. Lethaby and published by Appleton & Co., New York, is one of the latest and best books on metal work.

5. The enamels used on metal are especially prepared for that purpose and cannot be used on china.

TREATMENT FOR BARBERRIES (Pages 248-249)

Leta Horlocker

IN the early September the barberry branches are hanging heavily with brilliant colored clusters of oblong berries,—in all the autumn colors—pale yellow, orange, greens, in light and dark shades, and luminous scarlets, the foliage being warm olive green. As the season advances the berries become a darker, richer scarlet, all in the same general hue of color. The foliage also changes, becoming lighter in color tones of yellow brown, ochres, reddish browns and greens, making a beautiful harmony of color for the rich transparent red of the berries.

Use Carnation, Orange Red, Blood Red and for shadow tones add Ruby and a touch of Brown or Black to the blood red.

The barberry permits many varieties of treatment for decorative treatment.

Here is a suggestion in simple treatment, pleasing for a small vase or plate border: Tint the vase an all-over tone of color for the first fire—mix into Silver Yellow, Meissen Brown, a touch of Black and Blood Red, making a warm ochre tone. This having been fired and being a satisfactory shade of color, draw your design. For the leaves a wash of Olive Green, not too dark, and the berries, Pompadour with a touch of Black to modify the brilliance, apply this thinly for the light berries and heavier for the dark ones—joining two tones of the same color; outline the entire design in black.

TREATMENT FOR RED ROSES (Supplement)

Teana McLennan Hinman

THE original of color study was painted in opaque color on tinted paper of a light tan shade. The following directions are for opaque color; the treatment for transparent color is entirely different.

A careful drawing is first made with charcoal as the surface of the paper is very delicate. The first tone is then washed over the whole study in clear large washes of red or green as the study requires for the shadow of the roses. The same color is used in both roses, Van Dyke Brown and Carmine, making the color a little deeper in the red roses than in the pink; in the red roses a little green in the darkest places will give depth. For the half tone of the pink roses a little Payne's Grey often produces the desired effect.

The greens are always made with the same colors, Payne's Grey, Indian Yellow and Prussian Blue, the amount of each color varied to suit the requirements of the copy, as blue will make the color colder in tone, yellow warmer, and Payne's Grey will make it darker. A little Carmine used with the greens gives a depth that adds to the general effect.

The background is a clear wash of Payne's Grey beginning at the top with the color thin and making it stronger, leaves are dense. This ground may be changed by using different colors. The small leaves and tendrils are of the same color as the background, a trifle darker with a clean cut outline. This done, the study is ready for the Chinese white; for the pink roses mix white with saffron and lay in the highest lights, use square brush and keep the stroke of the brush with the modeling of the rose. Mix the little green with pink for a half tone, as half tone of a pink rose is one of the important features, be careful to have it exact. For the red roses, the same colors are used with a touch of Payne's Grey in the deepest shade and a little Carmine in the lights to give the bluish color of the red rose. Always keep a dark rose wet while working at it; in this way the hard lines are avoided. The light shade of the leaves is produced with white Lemon Yellow and Emerald Green, the half tones by the Hook-

er Green and White and a touch of Carmine in the darkest shadows and Van Dyke Brown, if necessary.

By following these instructions and the copy, one should make a very good rose study and a picture, although it may not be an exact copy. One can copy a picture accurately if he so desires, but it takes an artist to make of it a picture.

ANSWERS TO CORRESPONDENTS.

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

Mrs. F. G. W.—For tinting we prefer not to use a ready prepared tinting oil as the mixture can be better adjusted to the surface to be covered and depth of color desired, if made on the palette when ready to tint. The general rule for tinting is: One-third as much flux as color (except Apple Green, Mixing Yellow and Pearl Grey, which need no flux), as much fat oil of turpentine as color and flux combined, thin with oil of lavender until it flows freely from brush without being tacky. For a light tint use a little more fat oil and lavender. Asbestos platters are laid on the bottom of a kiln to make it thicker so that it will take longer to heat, give the upper part of kiln a chance to heat and so make the china fire more evenly. The water colors and water gold for china have been used with some success by a few artists but we consider these mixed with oil much preferable.

Mrs. C. S.—If you wish your gold very bright you must allow nothing to touch it. Put your lustre on and fire it first then retouch your lustre and put on your paste for raised gold. After this is fired if it is necessary retouch your lustre again, being careful not to let it run over the paste, then put on your gold in two good coats. This should finish the piece in good condition, but if your gold does not come out rich enough, it is possible to retouch it and fire again.

H. E. B.—Liquid bright gold can be used as a finish coat under Roman gold—firing it first. But this gold will not be as rich a color. There is no reason why it will not wear as well—any gold will wear off the handles if constantly used. If you rub flux on a porcelain painting, the reds will disappear, and some of the yellows and the iron browns—the colors called Ivory Glaze, Violet Glaze, etc., etc.—will do somewhat the same thing, giving a glaze and monochromatic tone to the entire painting.

E. M.—If your colors rub off after firing they are certainly under fired or you use some chemical that has an injurious effect on the color. We do not understand the process of photographing on china but refer you to our advertisers.

J. A. C.—Lustre colors come ready prepared in liquid form—if too thick they may be thinned with oil of lavender. They may be used over any fired light color or gold but are best on the white china or gold. They do not come out well over heavy color.

Mrs. B. M.—You will find a treatment of cherries under the design of Thorn Apples by Miss Stewart in Feb. K. S., also cherries by Mary Alta Morris in December 1901, and wild cherries by Miss Stewart in March 1902. For Fox grapes use Bunding Blue, black with a touch of Ruby Purple, for the leaves and stems the same colors with Yellow Brown added.

R. P.—You will find an answer to your questions on the editorial page. We do not know of any literature on the subject.

A. W.—If your pink roses came out a bricky color the plate was under-fired. Fire it over again and give it a hotter place in the kiln, the top is cooler than the bottom of a kiln. Outlines made in color with sugar and water will fire as permanently as with oil and turpentine. When several colors are given as background colors, they are usually put on separately and blended into each other in painting. You must use your judgment as to what tone you want, if you want a yellowish tone instead of yellow shading into pink, mix the colors together. There is a good Grey Green made both by Miss Mason and Mr. Fry. D K green 7 is a grey green and blue, carmine and yellow make a grey green.

Sister M. F.—Your request came too late for the Feb. K. S. You are right in suggesting that, when tiny black specks appear in light colors on china and appear to be in the china, that the fire has brought them out—your specks do not come from dust but from a poor piece of ware. Sometimes old china refired does the same thing. You cannot remove the specks.

Liquid bright silver comes out blurry when put on too heavily or when there has been moisture on the piece, as from the perspiration of the hand—you cannot brighten it, except to put burnish silver or gold over it.

M. D. S.—Dresden Relief White "Aufsetzweis" in tubes is the most reliable enamel. When color is used with it no flux is needed. About 1-5 of color will tint it sufficiently, or less. When no color is used add $\frac{1}{2}$ flux, for flat enamel use $\frac{1}{2}$ flux and 1-5 color also. Red is complimentary to green, yellow to violet, blue to orange, etc., etc. See Mr. Frochlich's article on color in Feb. number.



MARCH, 1904
SUPPLEMENT TO
KERAMIC STUDIO

ROSES—TEANA MCLENNAN HINMAN

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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SYRACUSE, N. Y.

KEEP THE FIRE ALIVE.

KERAMIC STUDIO

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A MONTHLY MAGAZINE FOR THE POTTER AND DECORATOR.

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Some Leading Agencies of Ceramic Studio

We take pleasure in mentioning a few of the leading agencies for the sale of the KERA-MIC STUDIO, where, also, subscriptions may be placed:

Baltimore, Md.—W. H. Cullimore, corner Lexington and Park Sts.
 Beaver Falls, Pa.—William T. Reeder, 1208 7th Ave.
 Boston, Mass.—Miss E. E. Page, 286 Boylston St.; Smith & McCance, Old Corner Book Store.
 Brooklyn, A. D. Mathews & Sons, Fulton Street.
 Buffalo—Mrs. Filkins, 609 Main Street.
 Chicago—A. C. McClurg & Co., Brentano's; Burley & Co.; A. H. Abbott & Co., 48 Madison Ave.
 Cincinnati—Miss M. Owen, 245 Elm Street; A. B. Closson, 4th Street near Race; Traxel & Maas, 4th St., near Elm.
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 Grand Rapids, Mich.—Miller, Wolfe Co.
 Indianapolis, Ind.—Keramic Supply Co., Lemcke Building.
 Kansas City, Mo.—Emery, Bird, Thayer Co., Geo. B. Peck Co.
 Louisville—Louisville Book Store.
 Milwaukee, Wis.—Des Forges Book Store, corner Wisconsin St. and B'way.

Minneapolis, Minn.—Minn. Art China Co., 607 1st Ave. So.
 New York City—Brentano's, Union Square; M. T. Wynne's, 11 E. 20th St., the Fry Art Co., 36 W. 24th St.; Wanamaker's; American News Co., J. B. Ketcham, 107 W. 125th Street.
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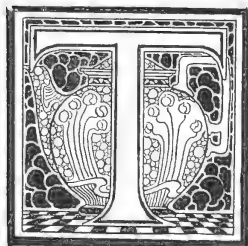
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KERAMIC STUDIO

Vol. V, No. 12

SYRACUSE NEW YORK

April 1904



THE chronic kicker is still at large. The species multiplies so rapidly that it never can become extinct and after all it has its use. For one thing it serves as a theme for an editorial when other topics fail. The chronic kicker has feasted so long at the bargain counter that anything short of a premium for allowing itself to be a subscriber is considered an imposition. Not so long ago the KERAMIC STUDIO was exploited by a quaint old thief of a confidence man who took subscriptions right and left and pocketed the money of the confiding china painter. He offered such extraordinary bargains that he was irresistible. To one he offered to throw in with KERAMIC STUDIO, forty original color studies; to another, a quarter of a page advertisement for a year; to another 300 color studies from which to select 50 as a premium, etc., etc. He was "sans peur et sans reproche," for no one doubted but that these flights of imagination were the apotheosis of the bargain hunter. All this, is apropos of the occasional letters which find their way to the editorial table, as to all other publications, complaining that the magazine is not gotten up for the writer's especial benefit only. One writes, "I am a flower painter and when you change the KERAMIC STUDIO so that it will be of some use to me and not put in all that wood carving and pottery and stencil designs, I will subscribe again." Another says, "Give us all the roses you can, I have no use for the other stuff." And still another, "I am interested only in historic ornament, can't you put in more of that and leave out all that naturalistic stuff," and so on ad infinitum.

Hardly one seems to realize that we have more than one subscriber and that one herself. With some thousands of subscribers we have almost as many different tastes to which we have to cater if we wish to continue in existence. We try always to give each one his "money's worth" and to throw in a "bargain" if possible.

Take the crafts worker, for instance, could any one take a lesson for thirty-five cents which would give one tenth of the practical instruction in that department? And what student of naturalistic painting could find anywhere for the price of KERAMIC STUDIO forty flower or fruit or other naturalistic studies with instructions for treatment in mineral or water color, many of these studies in color. We give at least this number of naturalistic studies in a year. And so on in every department.

We cannot always offer as good designs to our subscribers as we could wish, for the supply of good designs is limited; but we give the best always that we can procure, and we trust that the future will bring all that our readers may desire.

To that end our semi-annual competitions are given and they are bearing surprisingly good fruit for the five short years of the existence of KERAMIC STUDIO. The best then, that we can do for the chronic kicker is to pass over letters and dropped subscriptions in patient silence and drop a tear in passing for the misguided one—and for our cash box.

We give in this issue a number of studies of Jack-in-the-

Pulpit, by various artists. We would like our subscribers to send in designs on this motif which will be criticized in the July Class Room, the designs must be sent by May 15th. We hope in this way to give practical, illustrated lessons in design which will follow Mr. Froehlich's course of instruction and which will be supplemented later by further articles.

We regret to announce that the article on color by Mr. Hugo Froehlich, which was to have been given in this number, has been unavoidably delayed on account of the difficulty of reproducing the color supplement which is to accompany it. This will, we hope, be given in the June issue.

The Prang Co. of 9 W. 18th Street, New York, are publishing the color chart referred to by Mr. Froehlich in his articles. Students will find this of the greatest benefit.

The following color supplements are in preparation for the coming year:

Peacock—Frederick H. Rhead—May, 1904.

Color schemes in pottery, textiles, &c.—Hugo Froehlich—June, 1904.

Nasturtiums—Mrs. H. Barclay Paist—July, 1904.

Figure Study, "Dawn," by Harriet Strafer.

Little Grapes by Sara Wood Safford.

Bachelor's Buttons, plate design, by Marie Crilley Wilson.

We expect also to give studies by Mr. F. B. Aulich, Miss Maud Mason, Mr. Marshal Fry and others; subjects not yet decided.

The report of the Exhibition of the Guild of Arts and Crafts was received too late for this number, but will be given in the May issue.

NATIONAL LEAGUE OF MINERAL PAINTERS

AT the last meeting of the Advisory Board the arrangements were completed for receiving the exhibit for the Varied Industries Building. The entire exhibit will be sent to New York and there will be judged. Blanks, giving the markings on the points most worthy to be considered, will be filled out for each piece, as in the previous comparative exhibitions, but only the best will be accepted for St. Louis, it being the feeling in the Advisory Board that each year should bring us to a point where the lines can be more rigidly drawn in favor of a higher standard of excellence.

The Committee has made arrangements for an informal view, before the shipment. This opportunity will be given on Thursday, April 7, at the store of Vogt & Dose, Barclay Street, New York.

We have as yet been unable to get any definite information regarding the meeting of the jury to pass upon the exhibit for the Art Palace.

A pleasant letter has been received from Miss Myra Boyd, the Cor. Secretary of the League, who is studying in Paris.

The triennial election of officers of the League will take place in New York early in May.

Mr. Hugo Froehlich of the Prang Educational Co. and Miss Amy Hicks of the Guild of Arts and Crafts, New York, have

kindly consented to act as judges for the National League, to criticize the results of the problems which constitute this year's course of study,—decorations on vases, pitchers and plates, of specified forms, also jars modelled in clay, drawings for cup forms and tile designs. There is no prize offered, but the best work will be selected by the two judges and sent to the St. Louis Exposition. One of the most interesting and helpful features of the study course, is that every piece submitted, whether chosen for St. Louis or not, will receive a written criticism from each judge, which will be mailed to the exhibitor.

IDA A. JOHNSTON,

President.



EMMA A. ERVIN

TREATMENT FOR JACK IN THE PULPIT

Maud Briggs Knowlton

THIS wild flower in a way resembles the calla lily in the green hood-like covering which conceals the spike of flowers inside as the white sheath covers the delicate spike-like stock of flowers in the center of the calla, only whereas the white calyx of the calla turns out, the Indian Turnip or Jack in the Pulpit drops down and conceals the spike in center when standing in an erect position.

This plant grows in damp dark places in the woods near a stream if possible, and is to be found in early spring.

In painting it, for the hood use, in lightest parts, Lemon

Yellow and Emerald Green, while middle tones are made of Aureolin and Prussian Blue, adding more Prussian Blue, and a little Olive Green for darkest greens. The reddish markings are of Brown Madder. Spike in center is of Lemon Yellow and Emerald Green, shading with a touch of Olive Green. Leaves made of Aureolin and Prussian Blue. In leaves where the warm yellowish greens predominate, use more of the Aureolin. In bluish ones, Prussian or Antwerp Blue. Shadow leaves and flowers are of Payne's Grey and a little Rose Madder.

Background, starting at top, is Cobalt Blue and a little Emerald Green, adding a little Rose Madder as you proceed downward, coming into the warm brownish pink colors with Brown Madder, Brown Pink, Olive Green and a little Prussian Blue.

In painting this, be sure and keep it good and wet, so as not to have hard tight edges. Strong accents are put in last with deep madder and Indigo. Paint flowers and stems first, then important leaves, leaving shadow flowers and leaves to be painted in when background is partially dry.



CLUB NOTES

At the regular monthly meeting of the N. Y. S. K. A. Miss Amy Mali Hicks gave an interesting and instructive talk on "Design as Related to Ceramics."

The Buffalo Society of Mineral Painters held an exhibition of china on March 23d and 24th, in the Banquet Hall, Hotel Iroquois. It was well attended.



EMMA A. ERVIN



JACK IN THE PULPIT—MAUD BRIGGS KNOWLTON

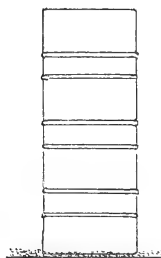


fig. 66.

Foyer, fire mouth—Murette, wall in front of fire mouth—Enfournement, setting.

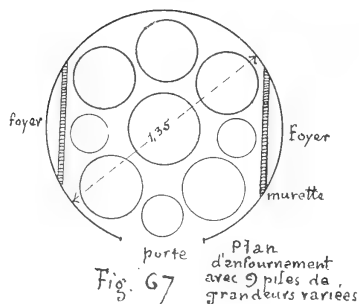


Fig. 67

GRAND FEU CERAMICS

IX—SAGGERS, PLACING AND SETTING—Continued

Taxile Doat

WHEN set on top of each other, the saggars form columns which are called bungs (Fig. 66), and reach the top of the firing chamber. Each bung must be built, from top to bottom, of saggars having the same diameter. The solidity of the bung is secured by that condition. The number of bungs varies according to the size of the kiln and the diameter of the saggars. Three bungs of saggars one foot in diameter found room in my first small coal kiln (Fig. 39, p. 197, Jan. 1904). In my wood kiln (Fig. 67) there are regularly nine bungs of different sizes to allow the placing of a great variety of shapes and to better distribute the spaces reserved to the passage of the flame. I say regularly, because I have limited myself to certain sizes of pieces. If I exceeded these sizes I would have to construct a larger kiln, to have a much more cumbersome material, also assistants and workmen, etc., which is not my purpose, notwithstanding the tendency of all ceramists to build castles in the air. My setting is, with slight variations, always about the same.

Plan of setting in a kiln having 1m, 35 diameter (4 feet 5 inches), (Fig. 67):

The bungs have between them a space of 4 inches and 2 inches near the fire mouths. Their vertical position is established with the plumb line; it must be perfect. Notwithstanding these precautions, the saggars would not keep their balance

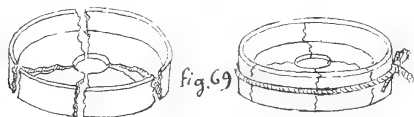


fig. 69

if they were not cemented together by the means of wads of lute (Fig. 68) placed between each piece of placing material, saggars, rings or bats. This clay is made of

Clay of Provins 30
Common yellow sand of Villebon 70

It is the most valuable help to the setter; it gives regularity and solidity to the bungs. This clay, fresh when it is put on, dries very rapidly and at once gives rigidity to the bung. As soon as the lute is dry, one removes the ropes which hold together the fragments of broken saggars and rings, which have been found to be still useful. This is left to the judgment of the setter. Sometimes broken saggars are better than new ones, but they must be held with ropes (Fig. 69) so as to be easily handled, and not to lose any piece, as the reconstruction of saggars from mixed fragments is worse than a Chinese puzzle game.

The lute can be made by rolling the clay by hand in the

shape of a rope about $\frac{1}{2}$ inch thick, but it is a slow way. Machines can be bought from Mr. Faure, engineer at Limoges, or from Mr. Wenger, Hanley (Staffordshire, England), the latter \$20 delivered at Hanley. As this price is high, I have solved the difficulty by employing an American machine made to make meat juice, which bears the mark "Enterprise Mfg. Co., Philadelphia" (Fig. 70). The bottom has been removed and replaced by an iron plaque (Fig. 71) in the shape of a movable

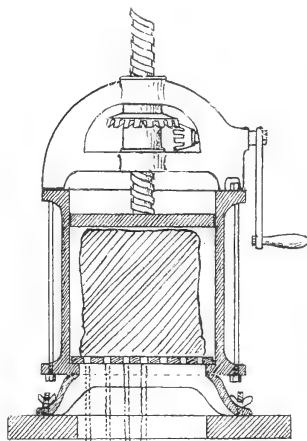


fig. 70



fig. 68

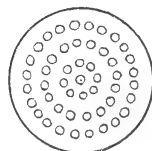


fig. 71

disc $6\frac{1}{2}$ inch in diameter, pierced with 50 holes about $\frac{1}{2}$ inch diameter. The vertical cylinder is filled with soft paste, which is forced through the holes by a screw-press acting on the cover. The wads of clay are gathered under, ready for use.

The saggarr at the base of a bung may or may not rest on the bottom of the kiln. In kilns with up draft, it rests on the bottom (Fig. 72) which has first been covered with a layer of

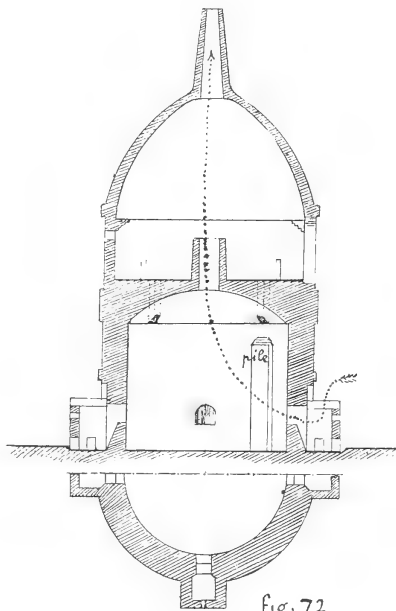


fig. 72

Four à flamme directe

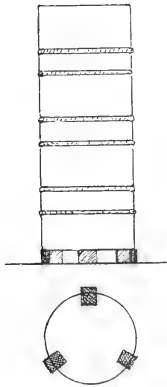


fig. 73

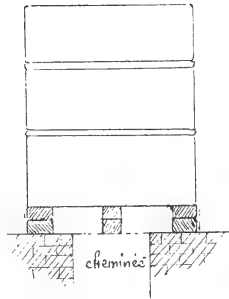


fig. 74

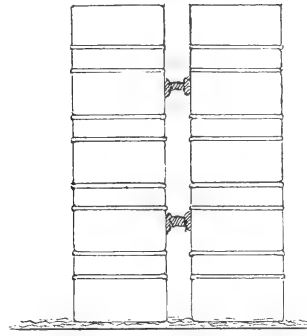


fig. 75

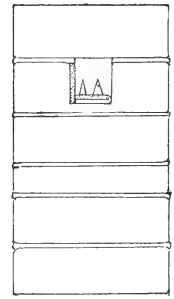
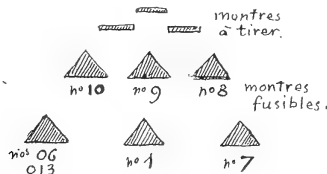


fig. 77

sand one full inch thick so that the sagger will have the whole surface of its base well supported. In kilns with down draft, this bottom sagger should rest on three small bricks placed in the shape of a triangle, so that the flame will freely circulate under the bung (Fig. 73). The big center bung, being on the opening of the chimney, must be raised a little more than the others (Fig. 72), to allow the flames to flow freely into the chimney.

These columns of saggars which are 4 inches distant from each other and sometimes more, are supported between themselves and also between the bungs and the sides of the kilns, by *props* (Fig. 75) made of fragments of old rings and cemented, not with lute, but with fresh firebrick clay. Thus propped the piles constitute a stable, unshakable block, with the necessary spaces for free circulation of the flame and its correct distribution in every part of the firing chamber (Fig. 76, p. 194 Jan. 1904). To neglect any of these precautions, is to risk the displacement or a collapse of a bung, with the irretrievable loss of the pieces it contains. And notwithstanding these precautions, unexpected accidents occasionally occur.

The bung placed in front of the door must contain the sagger for the cones. This sagger is placed at $\frac{2}{3}$ (Fig. 77) of the height from the bottom to the vault. The cones and trial pieces are arranged so that they can be easily watched during the whole firing. This is a very important point. Here is the arrangement which I use:



Cones 06 or 013 are placed on the left; then cone 1 and on the right 7, between 7 and 1 place 8; 9 comes next, then 10 on the left. When the time to observe 9 and 10 has come, cones 06 and 1 have disappeared and cannot hide the others. The trial pieces are behind.

To prevent the cones from accidentally falling during the firing, it is well to place around their base a wad of lute (Fig. 87).

When in a small kiln one has to fire only two or three large pieces, they are placed in large saggars which are set across the top. This consists (Fig. 79) in resting the sagger or saggars which contain the large pieces on 2, 3, 4 or even 5

bungs, which need not have the same diameter, but must have the same height. First large balls of lute are placed at equal distances on all points of contact with the bungs. On these balls is placed a large covering bat and on this bat the crossing sagger is set, perfectly level.

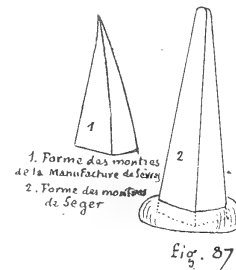


fig. 87

When the setting is completed, the doors are closed with two brick walls the outside of which is covered with a coat of clayey dirt or mortar made of damp sand mixed with clay.

Clay	50
Common yellow sand	50

These two materials are found everywhere.

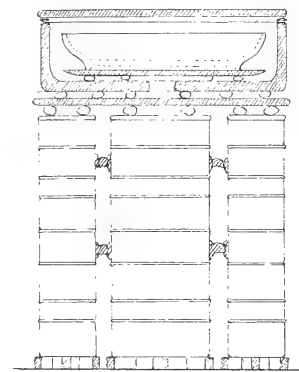


fig. 79

At Limoges and even at Sèvres, a space of 4 to 5½ inches only is left between the two walls, so that the first wall is as much as 5½ and even 7½ inches inside the wall of the kiln. I think that it is more correct to give to the door the exact

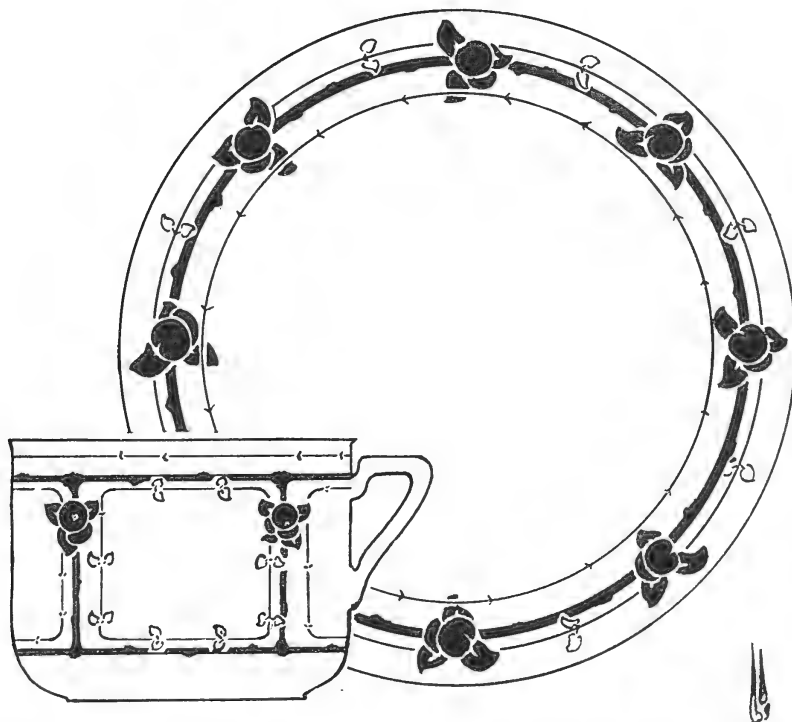
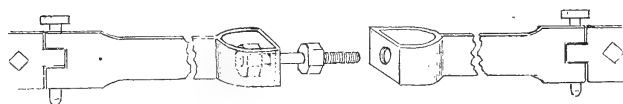
thickness of the wall of the firing chamber, thus increasing the general resistance to pressure and preventing as much as possible the loss of heat through the door which is so well known to firers. This I do and the space between the two walls is filled with dry fine sand. The object is to increase the thickness of the door and to hermetically close it so as to prevent infiltration of air during the firing. This sand is made of fragments of lute which are gathered after firing and ground.

While constructing the door, when two-thirds are built, the movable spyhole is placed across the two walls, in the axis of the center of the cone sagger (Fig. 77). This spyhole is in the shape of a square box. It is in fire brick and open at both ends. The outside opening is closed with a stopper of same material which fits it well. This stopper is pierced with a hole closed with a piece of white glass through which the different phases of firing may be watched (Figs. 36, 37, 38, p. 195, Jan. 1904).

The baking chamber is closed only by one wall strongly washed with mortar. It has no spyhole.

When the door is completed, the two movable parts of the iron bracing which goes over the door, are closed (Fig. 78). These two parts are on hinges and are tightly stretched by means of a strong bolt.

As a conclusion to this article, I will advise the beginner to make his placing material, or have it made, with the materials I have mentioned, until he has found their equivalent or better materials in his own country. The learned article of Mr. Charles F. Binns satisfies me that it will be easy to find these. To avoid severe disappointments, the beginner will do well to follow my instructions closely. He will first bake his placing material, will learn the placing of simple forms, fire without giving too much attention to the exact filling of saggars. He will stop his bungs about 4 inches from the vault of the firing chamber and will prop them solidly. He will fix up some machine to make lute and will give the utmost care to his first setting. With a little practice every precaution to be taken will come to the mind naturally. At each setting he will take into account the different degrees of sensitiveness of the glazes, so that some will be placed in the hottest parts, others in the parts of less intense heat in the kiln. As the base of the bung is less hot and more oxidising as a rule he will place there the colors which need for a good development a very oxidising atmosphere, like those based upon Cobalt, manganese or chrome, or the colored glazes, the fusibility of which causes them to easily flow, which is a great defect of these glazes.



CUP AND SAUCER—RUSSELL GOODWIN

To be executed in two shades of gold or gold and yellow brown lustre.



ROSE APPLE DESIGN FOR PLATE—KATHARINE SINCLAIR

To be executed in blue or green

FLOWER POT HOLDERS

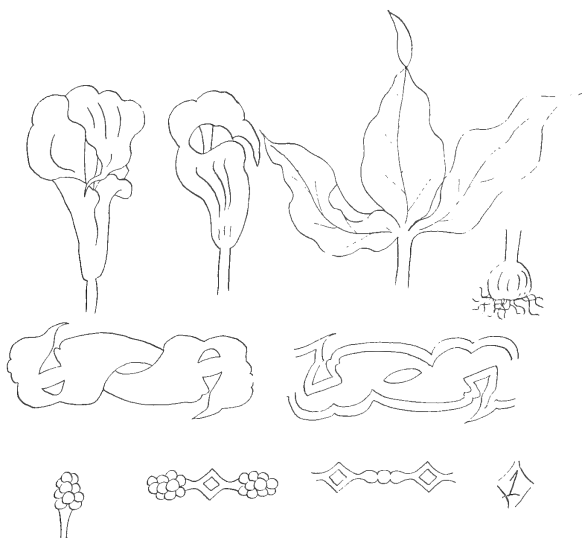
WHEN one has started a nice store of potted bulbs, begonia or geranium slips for Christmas gifts, thinking to add a small jardiniere at the proper time to complete the remembrance, the fact is brought to mind that nearly all flower pot receptacles to be found in ordinary shops are ugly in shape and decoration. With but few exceptions whatever is within reach of the average purse is so unfitting in color and design as to destroy the beauty of the daintest fern or kill the color of the choicest hyacinth.

A good plan is to pick up desirable shapes and colors whenever found, because often when one goes to buy there is no choice. As a rule a plant thrives best in a jardiniere that does not close tightly round the pot at the top, as this allows better evaporation.

No plant should be kept in one all the time, but given a week's rest now and then to allow the extra moisture to evaporate through the earthen pot, thus keeping the soil sweet.

A small jar of clear soft pink is dainty for a small fern, a cocoa palm and especially for old fashioned pink oxalis, the blossoms repeating the color and the shape of the leaves showing well against the pink sides. Pink Roman hyacinths in a six-inch jardiniere of clear pink make an attractive gift.

Blue and white in the small sizes is a good selection, also the red, white and gold bowls sometimes found in Chinese ware. The popular basket, either handmade or selected from the many cheaper ones, makes a pretty holder if a cheap saucer, a size smaller than the bottom of the basket, is put in first to protect the straw. After the beauty of the plant or blossoming bulb is past, the basket can be used for other purposes if care has been taken in watering.—*Boston Evening Herald*.



CHINA FIDDLES

THE latest invention in the domain of ceramists is the manufacture of violins and mandolins from porcelain. A well-known manufacturer of the Meissen ocarinas and porcelain organs has invented a process for the manufacture of violins and mandolins from clay. Some violins have already

been completed, and the inventor has applied for letters patent for the same in different countries.

Under this process the violins are cast, and every violin is guaranteed a success and to be unexcelled for producing music. The latter quality constitutes precisely the chief value of this invention. The porcelain body, it is claimed, is better able to produce sound than a wooden one, since it co-operates in the production of sound, making the notes soft and full. —*Express, Portland, Me.*



TREATMENT FOR VASE

Jeanne M. Stewart

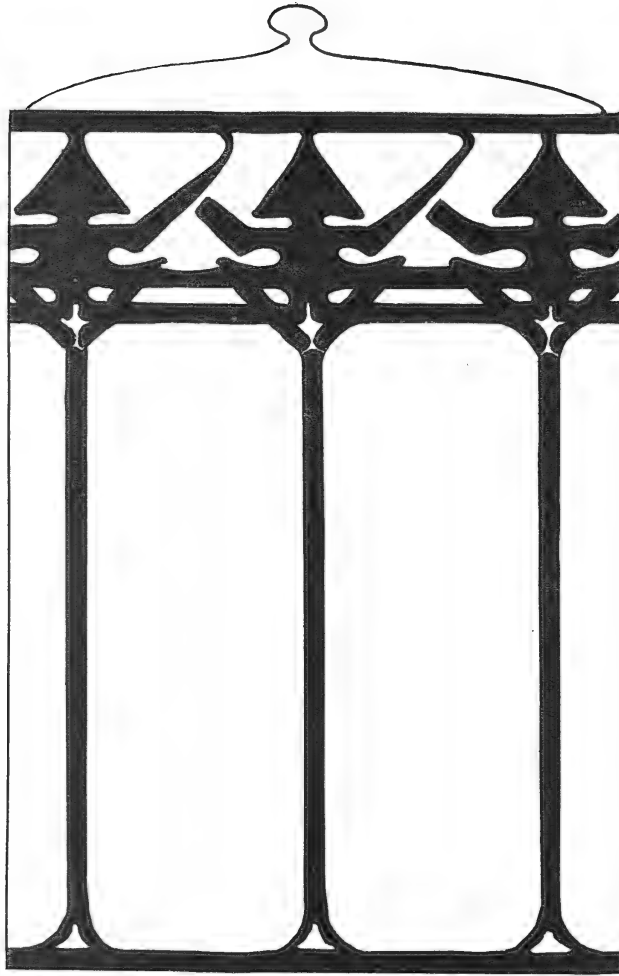
THESE flowers are a yellowish green with strong markings of maroon and brown. Use Yellow Green, shading with Pompadour and Chestnut Brown to which a little Maroon is added in darker tones. The leaves should be rather light greens tending more to the blue than yellow tones. After the design has been fired a background is painted and padded. This should be a light ivory yellow at top of vase, with dashes of lemon yellow drawn down into the maroon at the base.

Stewart's Pompadour is used to blend yellow and Stewart's Maroon together.

The background is applied again after the second fire and a part of the design left under the tint, softening edges, giving an underglaze effect. When the background becomes almost dry the maroon is dusted over the lower part of vase as this color should be very dark and rich.



JACK IN THE PULPIT DESIGN FOR VASE—JEANNE M. STEWART



DANDELION LEAF DESIGN FOR CRACKER JAR—MISS AUSTIN ROSSER

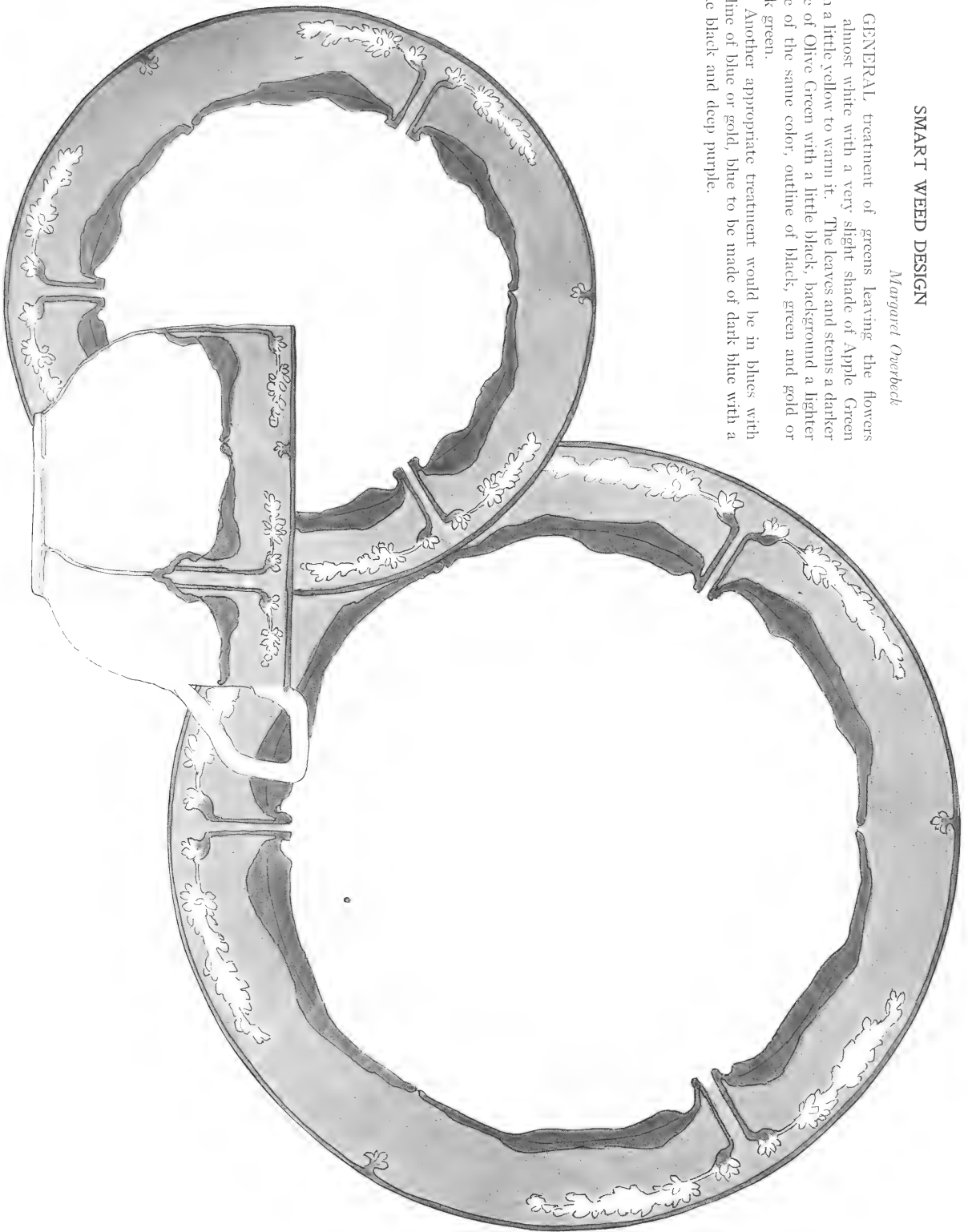
The design is in gold outlined with black on a ground of yellow lustre. Or it may be carried out in monochrome using either blue or green with good effect.

SMART WEED DESIGN

Margaret Overbeck

A GENERAL treatment of greens leaving the flowers almost white with a very slight shade of Apple Green with a little yellow to warm it. The leaves and stems a darker tone of Olive Green with a little black, background a lighter tone of the same color, outline of black, green and gold or dark green.

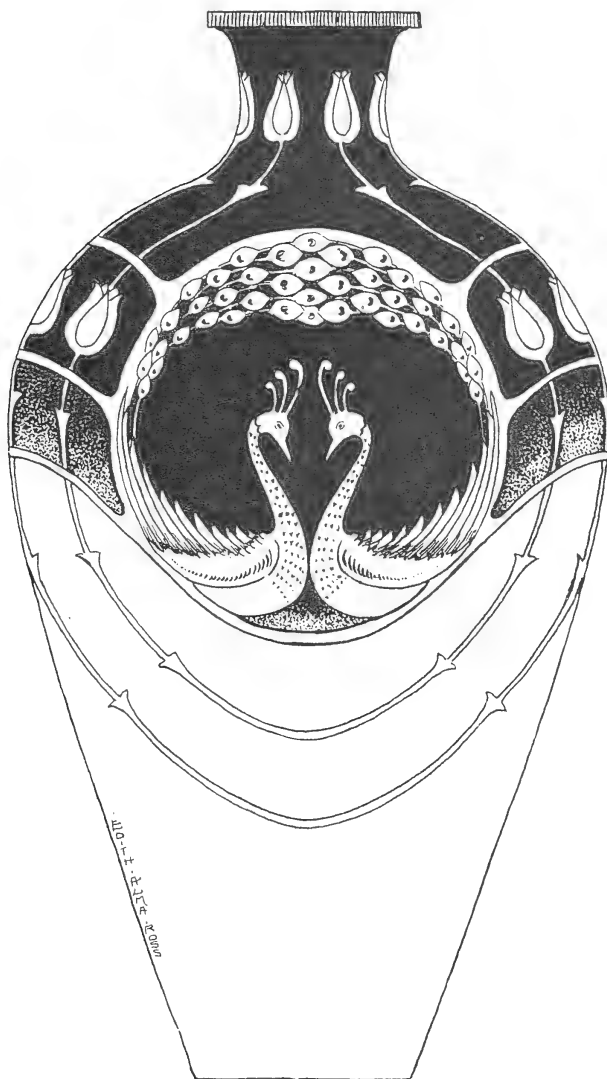
Another appropriate treatment would be in blues with outline of blue or gold, blue to be made of dark blue with a little black and deep purple.



BIRD DESIGN FOR VASE

Edith Alma Ross

THE top of the vase is tinted a dark blue fading through medium blue to cream color at base. The lotus buds stems, leaves, and the bands which cross them and surround the medallion are of gold outlined with dark blue. The background of the medallion is yellowish cream, darker at the base and greenish in tinge at the top where it is lighter.



The birds are a medium blue of the same shade as the vase proper and gradually grow greenish in tint toward the top. The outlines and markings on the birds are a dark blue. Other treatments may be used.



STUDIO NOTE

An interesting exhibition of the work of Mr. Franz A. Bischoff was held this month at the art rooms of Messrs. A. B. Closson & Sons, Cincinnati, O.

JAPANESE PORCELAIN

Small pieces of Japanese porcelains come in fine ware, most attractive decorations and at absurdly low prices, when one considers the time and work put into its making. A Japanese dish is made in a village home. All the ridges on the side and bottom are made with the thumb. The design and colorings show the handiwork of the true artist, while the dish is finally fired at a heat of 1,000 degrees. So it is both beautiful, and as near indestructible as any porcelain can be. On this account, the apostle of the household art, Miss Both Hendriksen, advocates its more general use, even in domestic purposes on the cook stove. "There is no reason," she says, "why almost anything cannot be cooked in such ware. You cannot put it directly on a red hot stove when it is cold without its cracking, but you could not do that with anything. If the dish is heated first with warm water it can be used for poaching eggs, scrambling or sauteeing, then carried direct to the table, with a saving of work and a direct advantage to the viands served." With a few such pretty dishes and only an alcohol stove or lamp for heating, a girl could live very comfortably and much more satisfactorily than go to some cheap, malodorous restaurant. Very pretty plates, bowls and pitchers can often be purchased as low as ten cents a piece.



TREATMENT FOR LONG LEAVED PLANTAIN

Mary V. Thayer

THE coloring of the long leaved plantain commends itself but little to our notice. Its beauty lies in the graceful curves of the leaf and slender stalks. The head is noticeable high above the grass of the lawn and the feathery white tassels are stirred with every breath. The leaves lie close to the ground and each plant is a rosette made up of their many edges and tapering forms. The color is a dark dull green relieved by the strong white parallel veins which show on both sides of the leaf. The stalks too are green and the heads a dark purplish brown which becomes nearly black, with the stamens white, hung on the slenderest of white threads.

The design is suited to a tall form and may be worked out in browns and greens with the dark background as indicated or the heads may lie against a lighter tint which contrasts with the heavy base color.



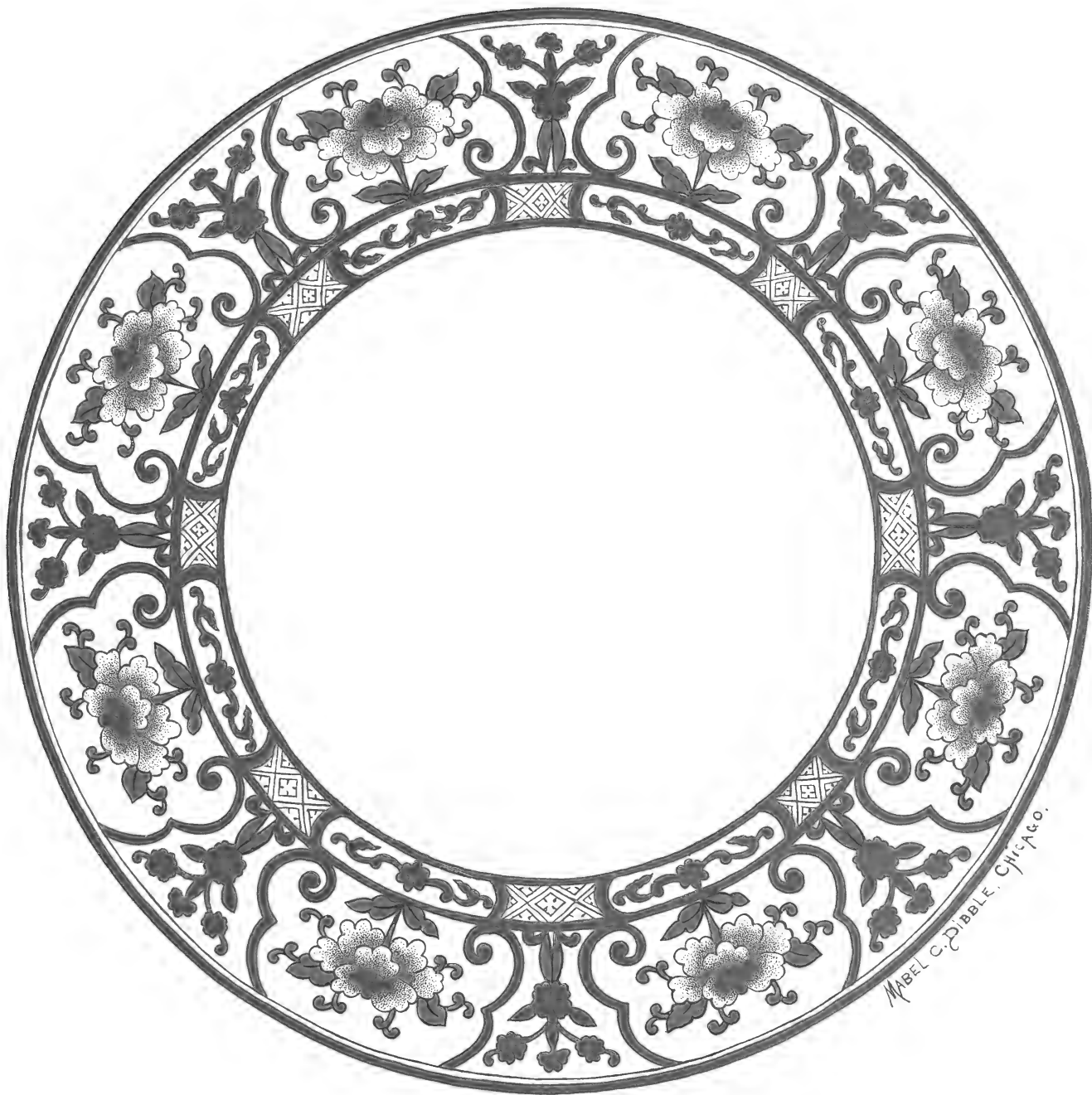
TREATMENT FOR CHINESE PLATE—Supplement

Mabel C. Dibble

FIRST make the six red circles and gold edge and fire, then the outlining can be more carefully done. Use Capucine Red, two parts, to one part Deep Red Brown, for lines and all red on plate. Also lay in all the gold, a light wash only, for this second firing.

To prepare work for third and last fire, strengthen all red outlines, go over the gold work carefully, then lay in Green Enamel, Apple Green, Yellow for mixing and Brown Green No. 6—all La Croix colors—add one-fourth Aufsetzweiss. For the flowers, lay in White Enamel first, one part Hancock's hard white enamel, to two parts Aufsetzweiss, and before it dries lay in the red, dragging the color into the white, and when dry strengthen the red at base of petals, or the white enamel will weaken the color too much.

The plate can be painted in two firings, but the three will give a more perfect and finished effect.



MABEL C. DIBBLE, CHICAGO.

CHINESE DESIGN FOR PLATE—MABEL C. DIBBLE



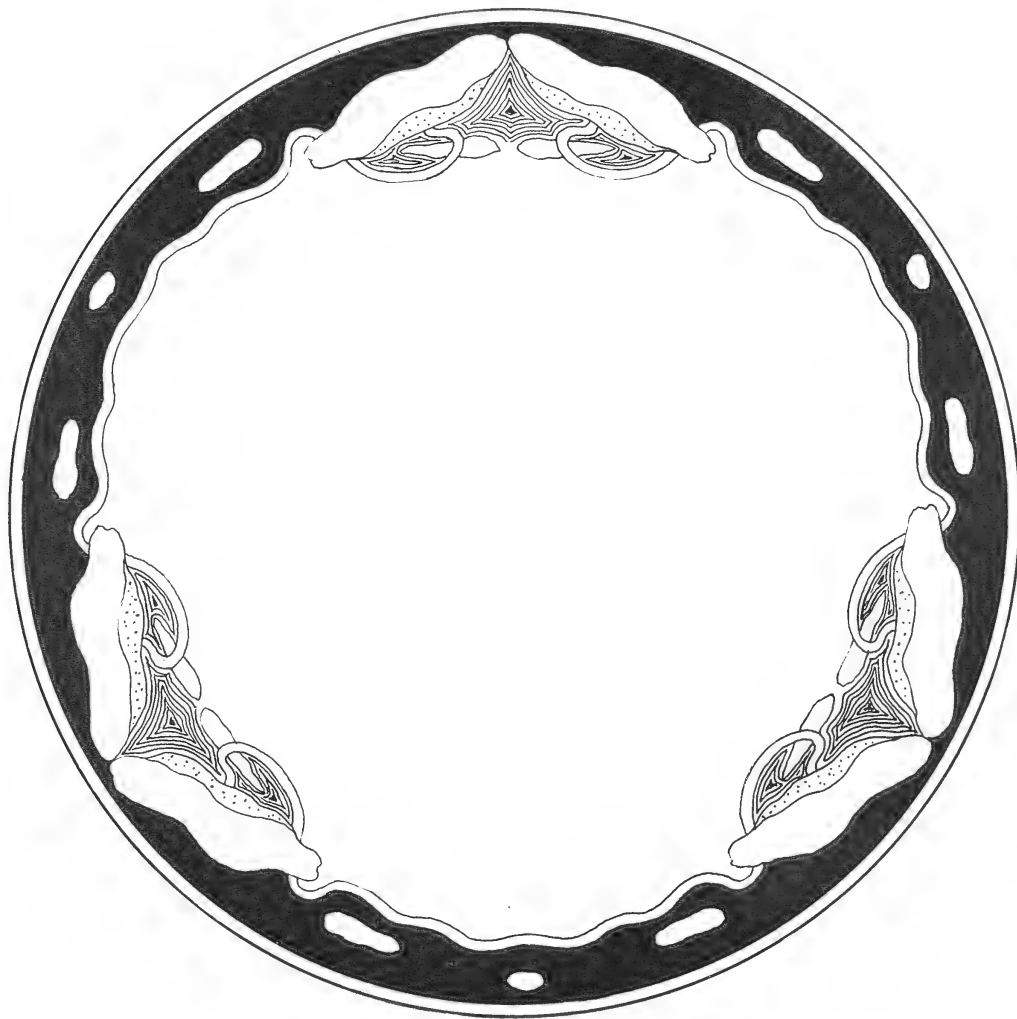
LONG LEAVED PLANTAIN—MARY V. THAYER

NUBIAN WATER BOTTLE

Fads come and go among collectors of articles as well as in the world of fashion. One of the newest of fads is the collecting of bottles. Some collectors arrange their bottles chronologically, others gather their bottles from certain countries. A young woman artist has come into possession of a treasure in this line, which she values highly. It is a Nubian water

bottle, and was brought from Egypt. Its leather covering is curiously ornamented with beads and shells strung together. It has a cord at the top and a fringe of leather and beads at the bottom. The latter is of particular interest in this day of bead adornment.

The beads are red, green and white, and are intermingled with small, pierced shells.



LILY LEAF DESIGN—ALICE WITTE SLOAN

TREATMENT FOR LILIES

S. Evannah Price

THE most pleasing color scheme for this design seems to be of a brownish green. For the first painting use Lemon Yellow for flowers, modeling with Yellow Brown, adding Brown Green in the darkest parts. The high lights should be kept very clear until the last fire. Wipe out the stamens very clean and touch the ends with Brown. Paint

the leaves with Yellow Green, Brown Green and Black. The background should be laid while all is moist with Yellow Brown, Brown Green and Black. For second fire strengthen shadows and background with same colors. For third fire tint lightly with Pearl Grey over all and when very dry dust the light part of background with Pearl Grey and darker parts with Meissen Brown. Let the Meissen Brown dusting extend over distant leaves and flowers.



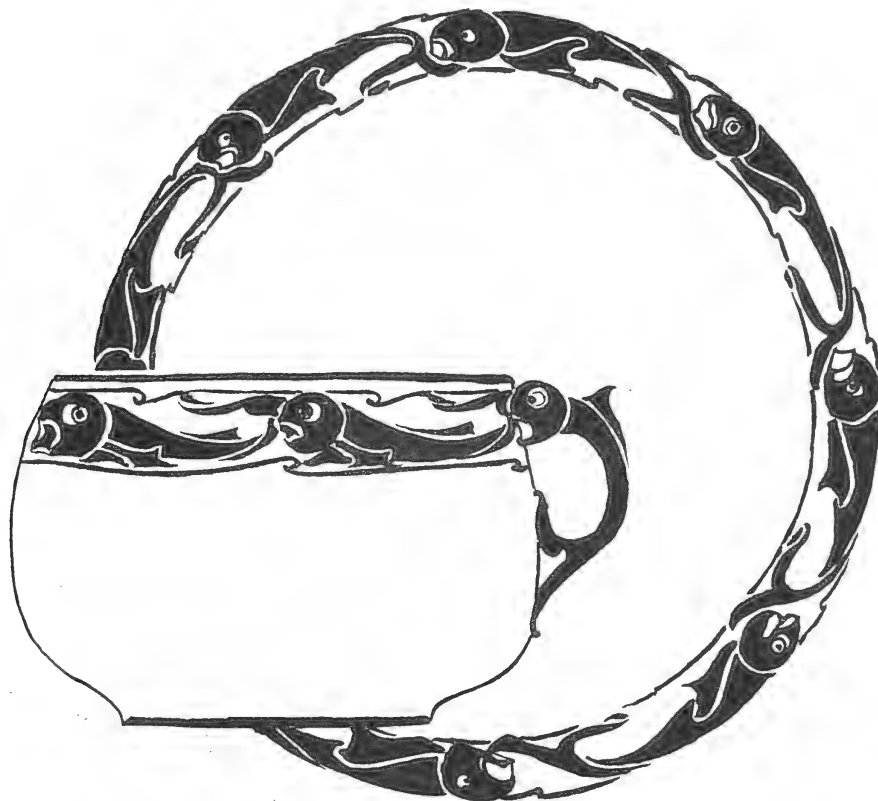
LILIES—S. EVANNAH PRICE

GREEK POTTERY

GREEK pottery, like early glass and other objects of historic interest, owes its preservation largely to its burial. It is uncovered to-day from tombs in almost perfect condition despite its age of more than twenty centuries and from the fact that the Etruscan graves are particularly well stored with it, many have supposed that it was an Etruscan product. But Etruria merely bought it from the Greeks, or, at most, imitated the Greek patterns. In the Institute collection there is a large jar of Corinthian pottery, so called, which dates back to the sixth century before Christ. The pieces of that epoch are characterized by black zones on an earthen ground, and by bands, or friezes, representing animals and gods. Indeed, the archaic forms are all characterized by black figures on a red

decadent art is seen in a vase on which are two heads facing a funeral stele. There is an overelaboration in the subsidiary ornament and a lack of the satisfying simplicity discoverable in the pieces made a century or two before. Yet the example of second century before Christ work that is offered in the vase planted in the top of a human head shows that the sense of form had not been debased, for the head is well modeled and is of a recognizably good Greek type, but the taste that would utilize a part of the human body for a purpose of this kind shows a lapse in the artistic ideal. The little vase of the third century before Christ that is exhibited in the museum is of interest because of its decoration, for it represents a warrior overtaken by his death genius in the form of a gryphon.

At the beginning of the Christian era the art of the Greek



FISH DESIGN FOR CUP AND SAUCER—MARY SIMPSON

Grey blue or gold outlined in red.

ground, while the more artistic and perfect pieces of later date reverse this method and show the pictures in red on a ground of black.

The art reached its perfection in about the fifth century before Christ. As the Institute specimens show, the distinctive marks of work of that period are bold, solid forms, with a smooth, almost lustrous surface where the black appears, economy of ornament and free drawing, somewhat conventional and often repeated.

By the third century before Christ, the art of the potter had run down. He still made his craters and amphorae of good clay, but the smoothness of finish, the freedom of the decoration, and something of the grace and soundness of outline in the utensil are missed. An excellent example of this

pottery was practically obsolete; hence the value of these rescues from the tombs that mark the sites of the Greek colonies in southern and central Italy are of importance as revelations not merely of craftsmanship, but as exhibiting the faiths and customs of a departed race.

To Greek pottery succeeded a new art—the pressed pottery of the Samians—and of this the museum has come into possession of several interesting copies. Yet hardly copies, either, for, although the clay was softened by the hand of moderns, yet, the figures in clear, high relief, that ornament the surfaces of the bowls, are impressed by actual contact with the molds made in Samos nineteen hundred years ago. It is believed that these cups and bowls are copies of others made in gold and silver.

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SIMPLE FURNITURE

VI—HOW TO CANE, RUSH AND PUT LEATHER SEATS IN CHAIRS

Elisabeth Saugstad

CANED chairs came into use in the latter part of the 17th century and were often beautifully and elaborately carved; and cane, sometimes covered with gold leaf, was often used on furniture that was "fine and French." In these days it is, I think, used more appropriately in chairs which, though they may be light and graceful in style, are without pretensions to elegance. A chair of the style of illustration 1 looks better caned than with any other finish.

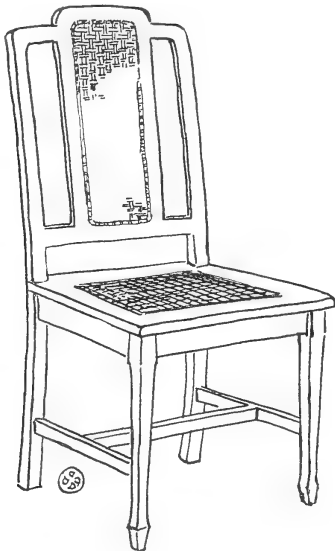


Illustration No. 1.

The process is a very simple one, and even the most intricate patterns do not offer any obstacles beyond average intelligence and skill, and as the material is also light, strong and inexpensive, there is much to commend it. In illus. 2 there are a number of suggestions for weaving, and any one with a little ingenuity should be able to work out a dozen more. Something fresh and unhackneyed would give a chair quite another air.

Cane can be bought at a basket factory or through an

obliging furniture dealer or repairer. It comes in several sizes, coarse, medium, fine and fine fine, and the choice will be regulated by the size of the chair and the pattern.

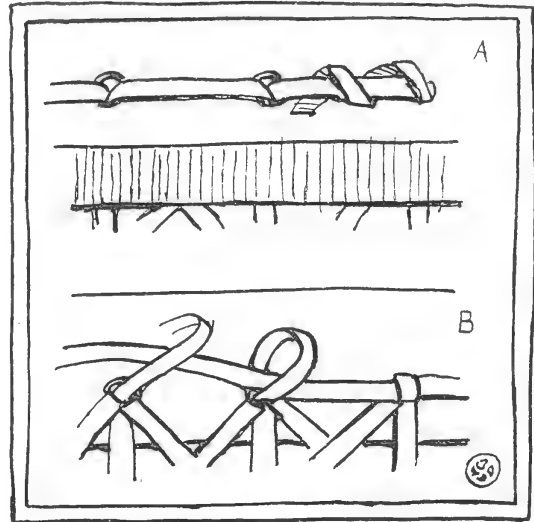


Illustration No. 3.

Probably the easiest position in caning is to sit on a stool with the chair to be seated tipped forward on the lap. About 2½ inches of a strand of cane, which has been made flexible by a few minutes soaking in water, is put down through the centre hole at the back and held in place by a small wooden peg, several of which must be provided. The long end is carried straight across the seat to the corresponding hole in the front edge and up through the next hole to the right, where another peg is inserted. The strand is then carried back again and down through the next hole to the right, there using the first peg to hold it. This process is continued to the right edge, care being taken not to cover the holes there, and to keep the strand flat. Beginning at the centre again the process is repeated till the left side is filled. Diagonal lines are put in from corner to corner, working first to one side then to the other and weaving over and under according to the design. If this is elaborate, requiring many strands, the first ones must be left quite loose, this "slack" being taken up in the interweaving of the last ones. The ends are fastened under-

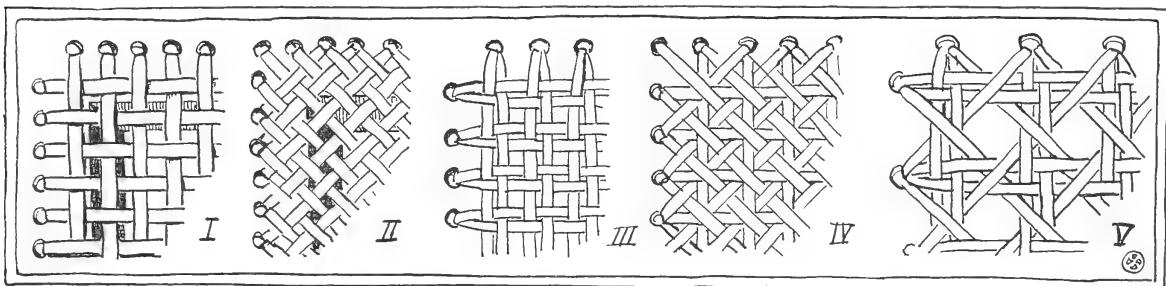


Illustration No. 2.

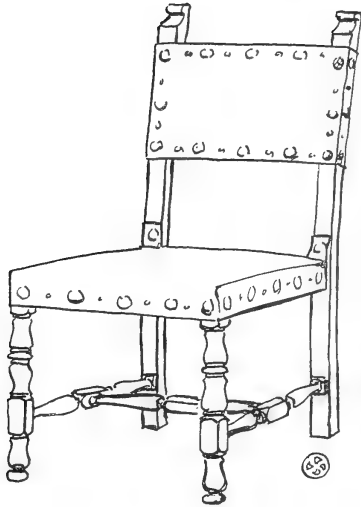


Illustration No. 7.

locks it in place. These stub ends, which may be too thick for twisting for as much as 6 or 8 inches, are trimmed afterwards. When only one leaf is used it is made continuous by tying a square knot in the corners. The points of particular importance are that the rush be the right degree of dampness, that the strand be kept even and firmly twisted and tightly drawn, and the corners true and neat.

When the seat is about a third filled, bits of rush must be stuffed in under the middle layer and this must be done from time to time as the work progresses, for it makes the seat much firmer and better looking.

When the seat is wider than deep, the space in the middle is filled by weaving forward and back, over and under. When it is wider in the front than the back the front corners can be filled separately until even with the back.

The chances are that the first seat will not present a very encouraging appearance, a general tendency to "humpiness" filling the beginner with despair. Much, however, can be done to remedy this by thoroughly dampening the seat, top and bottom, by wrapping it in wet cloths, and when it is pliable,

unruly strands may be caught into place. By sewing diagonally across the strand in the direction of the twist it will not be noticeable.

An old chair from which the rush may be untwisted and manner of weaving actually seen, is a great help, as well as the careful examination of any well rushed chair.

Certain styles of chairs seem almost to demand the use of leather, as the one in illus. 7, for instance. It is rather expensive, but it is so fine and satisfactory, that it is not an extravagance in the end.

Cowhide, calfskin and sheepskin are the kinds commonly used, and can be bought by the square foot or the whole skin. Though the latter way is cheaper there is a good deal of waste, but one can always find some use for the odds and ends. Prices vary greatly on all of these according to weight, finish, quality and whether colored or natural. The latter, if unpolished, can be stained with artist's tube colors, slightly thinned with turpentine and well rubbed in, or with colored inks. Both can be finished, after they are perfectly dry, with the wax and turpentine polish.

Deep, soft greens of all shades, dull reds, rich tans and browns and dull yellows are the most satisfactory. Of course the ornamental nails must be carefully chosen to go with the general decorative scheme, both in style and color. The bright brass nails of commerce can be toned down by rubbing off the lacquer with a bit of emery cloth or very fine sand paper.

Very heavy cowhide can be used without padding in such seats as those in illus. 8, but padding it is necessary with the thinner, softer leathers. Illus. 9 shows two methods. The first, A, is the simpler one, but makes a harder seat which does not retain its shape quite as well. Webbing bands are interlaced over the frame and drawn as tight as possible and over this burlap is fastened, both being tacked to the top of the frame. Over this is placed sufficient curled hair to make the desired thickness and it is covered with muslin or cotton flannel. It is now ready for the final cover which is stretched tightly over it and held in place by small, flat headed furniture tacks. These are covered by a strip of leather as wide as the ornamental nails, which finish it. In B, illus. 9, the webbing, burlap and hair are put on as in A, then another piece of burlap, which is stitched through the edge making a ridge all around; and the centre is stitched through and through. The hollow thus formed is

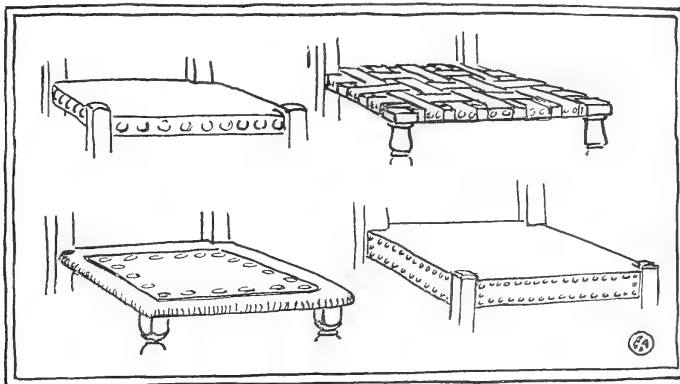


Illustration No. 8.

stuffing it from below until it cannot be stuffed any more; making it, of course, as even, as even as possible. Then with a long, strong darning needle and tan colored linen thread any

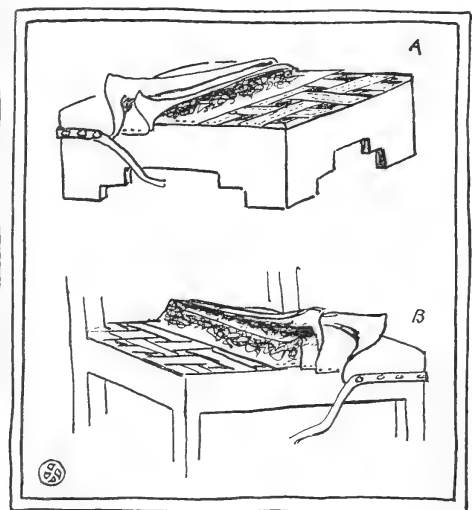


Illustration No. 9.

neath by drawing them twice through the next loop and creasing them flat, as in *A* illus. 3. The top is finished by a strand laid over the holes and caught in place by another strand brought from below over it and down again through the same hole, as in *B* illus. 3.

Twisted rushes make the most attractive of seats which are particularly adapted to simple chairs, whether large or small; and are strong, durable and picturesque. The principle of weaving is simplicity itself, but it requires strong hands and much patience to make a perfect seat, and it is slow work.

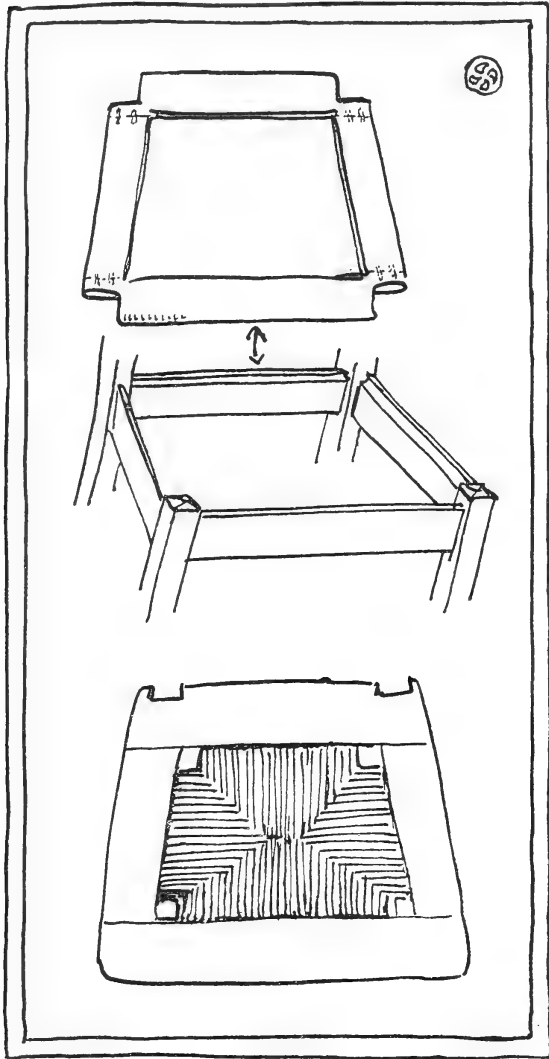


Illustration No. 4.

Imported or domestic rush can probably be gotten most easily through a furniture dealer or repairer, or it can be gathered from the swamps. It is the common bulrush, or cattail, and should be harvested in August when the tips begin to turn brown. It must be cured in a dry, rather dark place with a circulation of air. When thoroughly dry it can be tied in bundles and stored away in an attic corner.

Illus. 4, 5 and 6 show several kinds of frames which may be used, the chief point to observe is that they must be rounded on the edges or they will eventually cut the rush.

The rush must be thoroughly dampened before using so that it will be flexible, that it may be tightly twisted and bent over the edges without breaking. If too wet it will shrink in drying, leaving wide spaces between the strands and the strands themselves uneven and rough. Only experience and practice can tell just the proper degree. A good way to dampen it is to roll it in a coarse, heavy cloth, like burlap or old bags that have been well soaked, and leave it at least 12 hours.



Illustration No. 5.

As rush varies greatly in width, as many leaves or blades must be twisted together as will make a strand the desired size, which may be only a single one for very fine work in a small, light chair, or enough to make a twist nearly as large as the little finger in one that is very large and heavy. The size having been decided, the ends of the strands are held against the side of the frame as at *A* illus. 6, which shows the manner of weaving very loose and open that the course of the strand

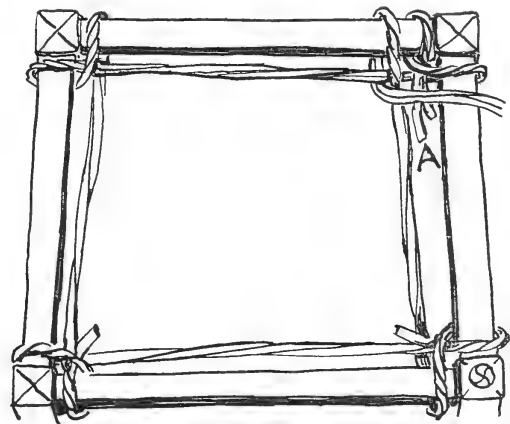


Illustration No. 6.

may be followed. The twist is firm and close on top and over the edges of the frame, but underneath it is only enough to keep the loose ends from straying. New leaves are added at the corners as they are required to keep the strand of even thickness, the stub end being inserted and held by the twist against the next strand until the loop comes around again and

filled with hair and covered with the muslin and leather.

A spring seat is made by tacking the webbing on the bottom of the frame, fastening the springs upon it, covering them with burlap and finishing as in *B*. Every part must be drawn tight and true, and the corners and edges be very neat and exact.

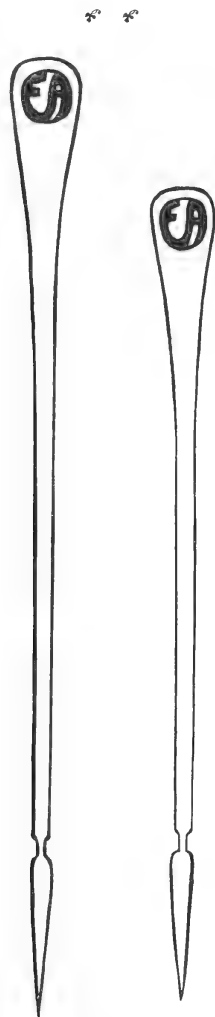


Fig. A.

Fig. B.

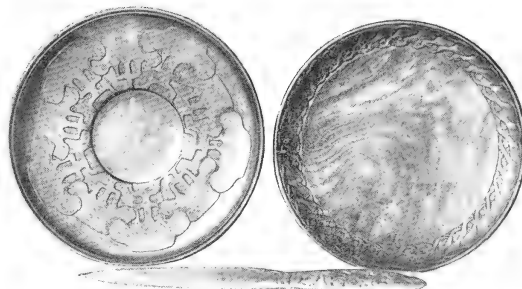
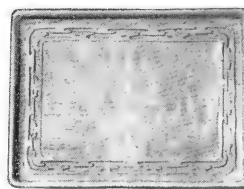
OLIVE PICK

Emily F. Peacock

THE Olive Pick (Fig. A.) is made from square silver wire, a little over one-eighth of an inch. Use eight inches for the olive pick and seven inches for the butter pick, (Fig. B.)

Anneal the handle end and hammer that on the anvil with a round faced hammer bringing it slowly into shape. This should only need a little filing to make it true. The pointed end of the pick is shaped by filing. After this is done take out all the file marks with emery cloth and polish with pumice and water or pumice and oil.

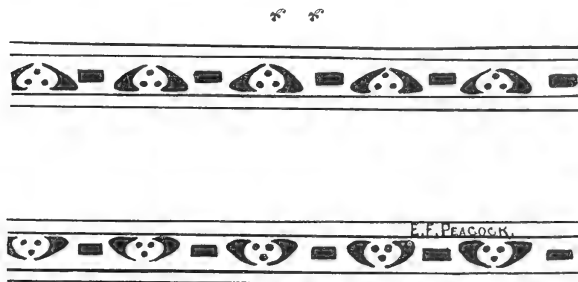
When the picks are completed, etch a monogram in the broad end of each handle.



TRAYS OF CARVED WOOD

Emily F. Peacock

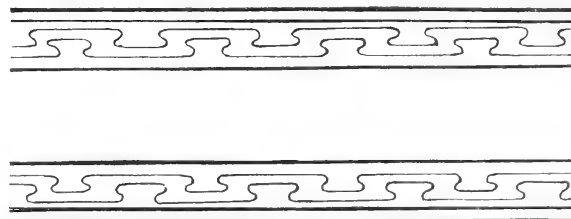
THE oblong tray by Miss Jaeger was carved down the required depth from $1\frac{1}{4}$ inch wood and the background of the design also carved down, so that the design was in low relief. The round trays were turned, the designs put on and carved in the same way.



DESIGNS FOR SILVER NAPKIN RINGS

Emily F. Peacock

USE a strip of silver about $5\frac{1}{2} \times 1\frac{1}{2}$ inches, 19 gauge. This must be cut very accurately before anything else is done. Trace on the design and mark it in with a steel point. Clean very thoroughly and etch the background as described in the July number, 1903, page 73. When the etching is deep enough, clean the silver and solder the two ends together. First make the ring perfectly round, by hammering it over a very true round hard wood pattern, with a wood or rawhide hammer, file both edges very smooth, and polish with tripoli or rouge.



MARY E. PECKHAM

ANSWERS TO INQUIRIES

F. G.—A draw plate is a flat piece of steel pierced with rows of graduated holes of different sizes and shapes, and used for drawing wire. Wire of 16 gauge can be drawn down to the smallest hole in the draw plate, but the wire must be annealed occasionally, as it becomes brittle in the drawing and breaks.

A. M.—Pure silver is better than sterling for making beryls—it is not so springy and shapes to the stone better. Use 28 or 30 gauge for ordinary beryls.

G. B.—A piece of Circassian walnut would be very suitable for the large tray, the grain of this wood is so beautiful, only a very simple design would be necessary.

W. S.—If the silver buttons are repousseed they should be backed with thin silver.

O. T.—A 5 lb. pitch ball and a 6 inch leather ring pad are the best sizes for general use.

E. S.—Doming punches are steel punches with round heads, they come in sets to fit the hollows in the steel doming block.

Miss K. L.—We will give a design for a silver tea strainer very soon.

G. H.—Try a raffle file for cleaning up the small places. This curved file will often reach an unfinished spot when a straight one will not.

O. L. I.—Stencils are made from regular stencil paper, bought by the yard. They must be cut out with a very sharp knife and coated with shellac.

F. P.—A window box made with the blue and white tiles would be very attractive. Six 6 inch tiles for each side, and one at each end; these could be framed in grey wood and the interior of the box lined with tin or zinc.



SHOP NOTES

We are in receipt of Miss Mason's catalogue of materials for porcelain decoration. It contains much valuable instruction in the use of colors, enamels, lustres, etc.

A neat little folder has just been received from Stearns, Fitch & Co., Springfield, O., with illustrations of their celebrated Kilns adapted to the use of gas or charcoal.



ANSWERS TO CORRESPONDENTS.

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

A. L. D.—We are always glad to give what information we can to subscribers. Occasionally it happens in the rush of business that letters are mislaid or lost but in this case your former letter was not received at all. There is a dark blue both in powder and tube colors, Marsching & Co. carry the dark blue in powder if you can not find it anywhere else.

For a deep red ground use Pompadour—Deep Red Brown or Carnation I. Beside Royal and Dark Green there is Brown Green, Yellow Green, Moss Green, Grass Green, Olive and many other tones between the two—or you can mix Albert Yellow or Yellow Brown with your greens to change the tone.

To make a sugar syrup for outlining dissolve enough sugar in hot water to make a thin syrup, rub it well into your color and you should have no trouble in using for outlining either with pen or brush. Use nothing else in the mixture but sugar, water and powder color.

Mrs. C. A. B.—For violets in Dresden colors use Ruby Purple, Violet and Banding Blue. For pink and yellow roses see treatment of colored supplement "Little Roses," by Sara Wood Safford, Nov. 1902. A good medium for powder colors:—6 drops oil copaiba to 1 drop clove oil—for tube colors use equal parts turpentine and oil of lavender, turpentine alone for sharp touches.

L. N. W.—Liquid bright gold is sometimes used with Roman gold for cheap gold effects on china, but it does not wear well and is not as fine a color as the Roman gold used alone. The liquid gold is put on for the first fire and Roman gold for the second—liquid gold is used as it comes in the bottle, thinning with gold essence or lavender oil if necessary. The Roman gold is usually thinned with spirits turpentine.

M. D. S.—The jardiniere of rococo design is so elaborately in relief that it is difficult to suggest a decoration. The shield or plain medallion on either side being the only spot free from raised work should be left undecorated or simply tinted as contrast to the rest. This shape is well adapted to lustre decoration as the modelling catches the light and brings out the color in the lustre. The plain shape would look well with a body of black lustre and a conventional border in lustre and gold or a tinted or grounded body with border in enamels and gold.

A. S.—In putting lustre over gold and silver, the latter should first be

burnished. Opal lustre is not very reliable, we often hear of its coming out of the fire with no color at all.

Miss B. C.—For painting mediums see Answer to C. A. B. Gold can be used over well dried color if the latter is not too heavy, but it is richer to have the white china under it.

J.—Lustre can sometimes be used over a light coat of paint but the effect is not always good. We would prefer carrying out the design entirely in lustre with gold or bronze, lustre and paint do not combine so well.

Opal and mother of pearl lustres are not reliable, we have had numerous complaints lately in regard to them. The sugar and water can be used for outlining only with powder color where no turpentine is combined with it. See answer to A. L. D. Hancock's and other enamels can be used flat but it is not necessary to add them to Aufsetzweis.

Mrs. E. M. F.—The German Powder black makes a good dusted ground or a rich black can be made by dusting with pompadour or blood red and then with Banding blue—few blacks have a good tone used alone. Usually add a little Banding blue, or for a warmer red, add pompadour.

For Daffodils use Albert Yellow, Yellow Brown—a little Violet for shading—Royal Brown and Dark Green.

Ivory Glaze is dusted over a finished painting to tone it all together and give it an even glaze.

C. D. E.—The powder enamels should not need an addition of flux for flat use, but if you find yours does not glaze you can add $\frac{1}{2}$ flux. You can outline in a second fire if you wish but it would be better to outline for first fire and retouch in second. Aufsetzweis always looks yellowish before firing and gives that tone to blue but usually it fires white and loses any yellow tone. There is no objection to a third fire for gold on paste but usually a second coat of gold over the first which has been dried will make the gold rich enough in the second fire.

The floor of the overglaze kiln is always the hottest part and the back is usually hotter than the front. We expect to give an article soon on the distinctions between naturalistic and conventional decoration. There is no reason why flowers could not be used conventionally or otherwise in any place where other motifs of decoration are in order.

Mrs. S. J. B.—We should prefer doing the entire set in little roses as you suggest, to using different kinds of flowers.

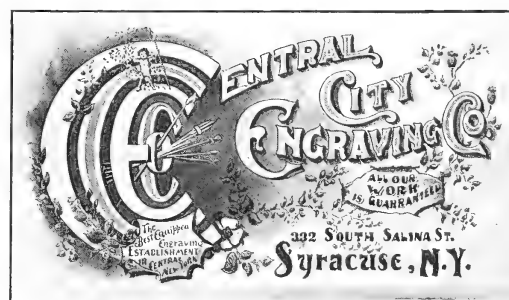
To get good pinks it is best to paint in lightly first with Pompadour, then when everything is finished and fired, except perhaps the gold, use Rose delicately and do not fire too hard.

For dusting or tinting the edges of plates, the Dresden yellow green is very good, as also Coalport and Sevres green, but these are liable to brown if underfired. Apple green also makes a delicate edge and Celadon or Grey green is very effective.

Any piece can be stacked leaning against the wall of the kiln but it is safer to put stilts between for large pieces. A piece filling the kiln diagonally would be safe if a stilt could be put behind it to prevent it wedging. Firing tests are as nearly reliable as any way of gauging the fire, only practice will teach one when the fire is just right.

M. H. A.—Any tinting or painting in color will go over Aufsetzweis except the iron reds and browns. You might perhaps remove the enamel with a fine sand paper and if the tint does not cover the spot try a gold design.

X.—You will find a recipe for gold in the April 1902, number of KERAMIC STUDIO. The Rose Book just issued by the Keramic Studio Pub. Co. has a large collection of designs of little roses by various decorators, with directions for painting which you would find very helpful.



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THE BOOK OF ROSES



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It contains over forty pages of designs and studies, many of which have appeared in back numbers of *Keramic Studio* now out of print, and the volume is also enriched by nine color studies by the following artists: Marshal Fry, F. B. Aulich, Sara Wood-Safford, E. Louise Jenkins, Anna B. Leonard, Rhoda Holmes Nicholls and Teana McLennan Hinman.

Among the other contributors to the book we have K. E. Cherry, Mary Alta Morris, Henrietta B. Paist, Hattie V. Young Palmer, Ida C. Failing, Marianna Heath, A. A. Robineau, Sara B. Vilas, M. M. Mason, I. M. Ferris, Nellie Sheldon, F. G. Wilson, Alyce Barber Pflager, Mariam L. Candler, Mary Alley Neal, E. Mason.

The book is designed to meet the requirements of both schools of decoration, the Conventional and Naturalistic, the space devoted to each being about equally divided. Treatments for china painting are published in full and many of the designs are accompanied by treatments for water colors.

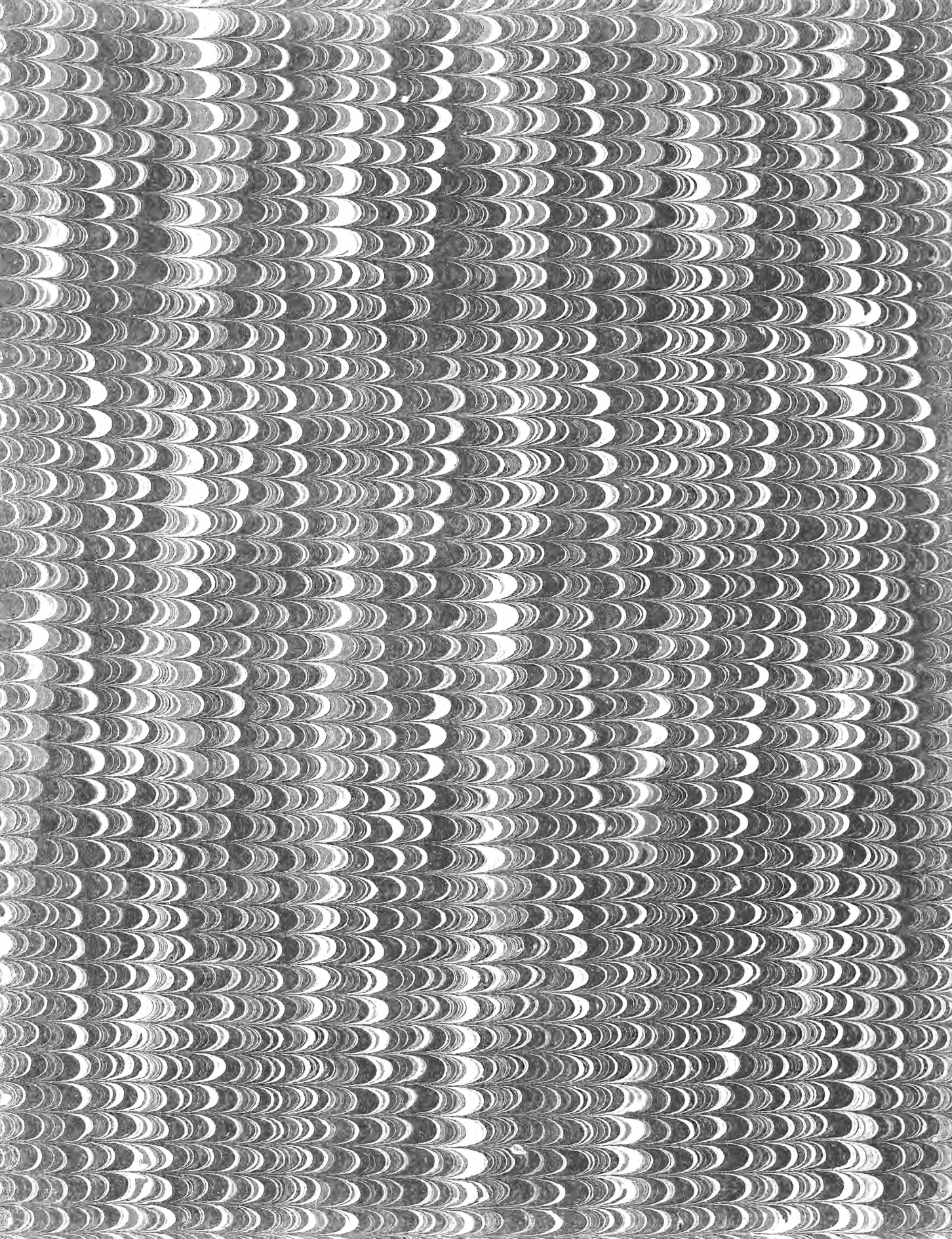
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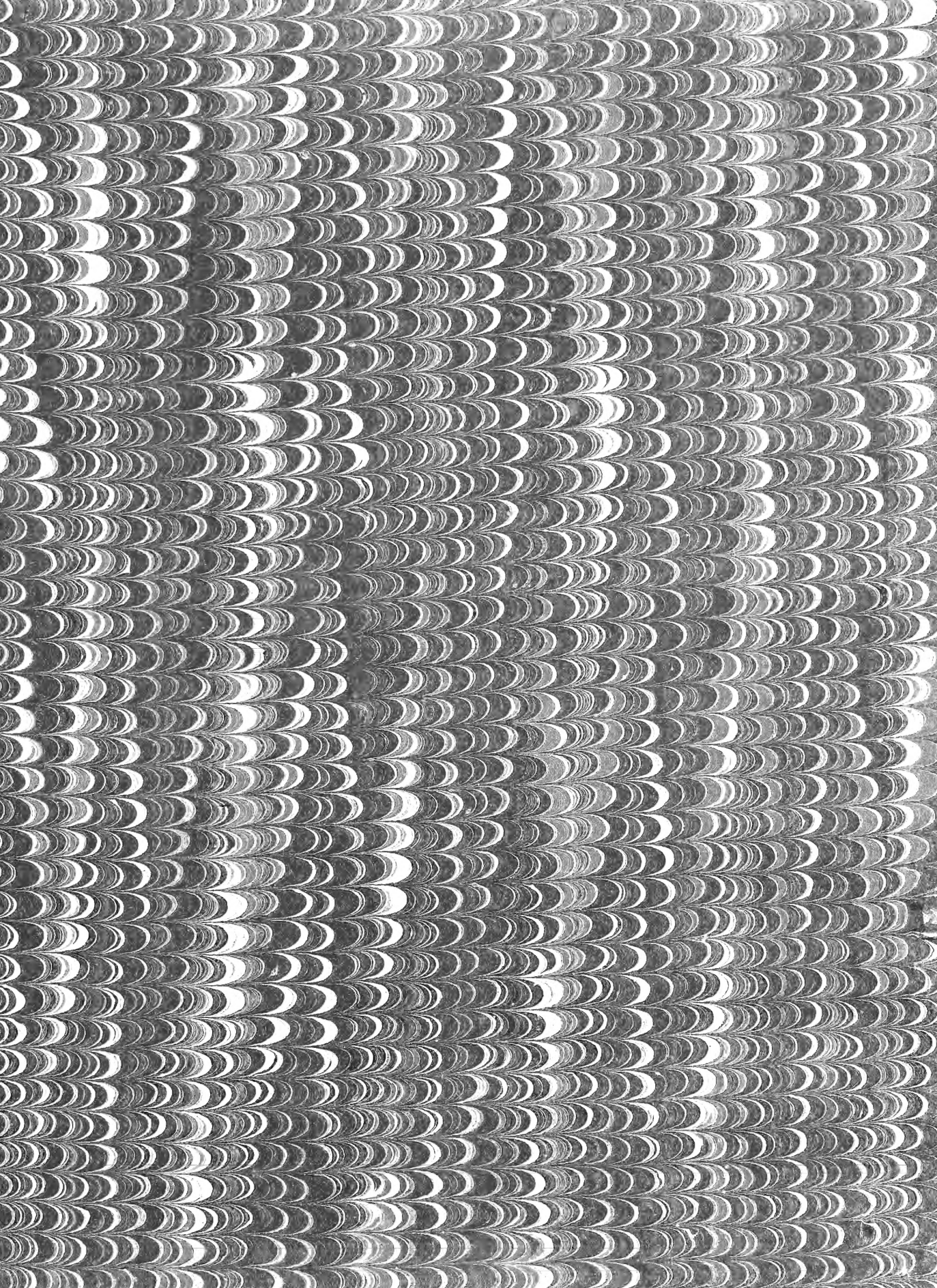
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